



SMUS
INDIA

SMUS Conference India 2023

Book of Abstracts



exceed
Deutscher Akademischer Austauschdienst
German Academic Exchange Service



©2023 SMUS India Conference
Indian Institute of Technology, Roorkee
February, 2023

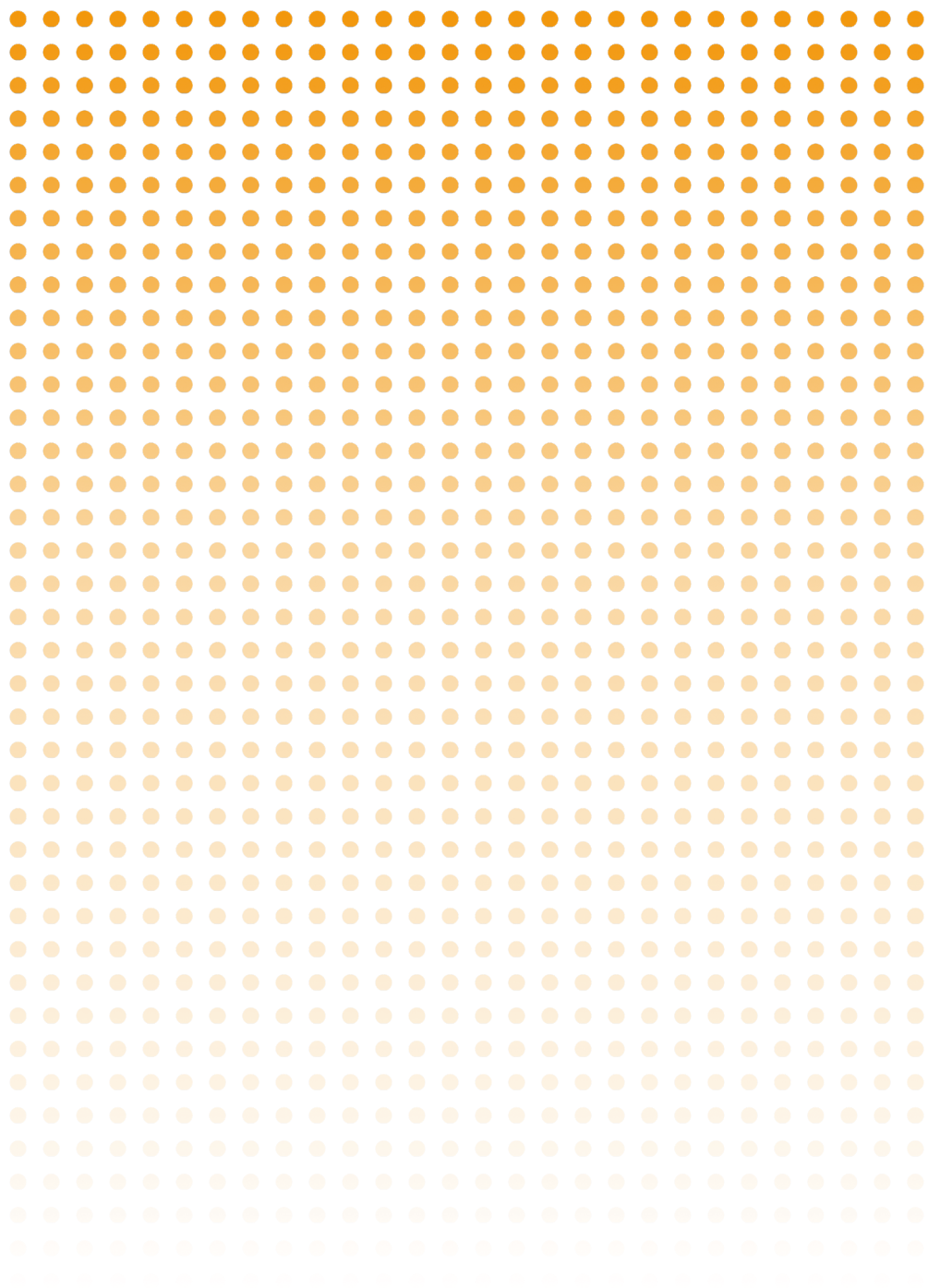
Editing Team:

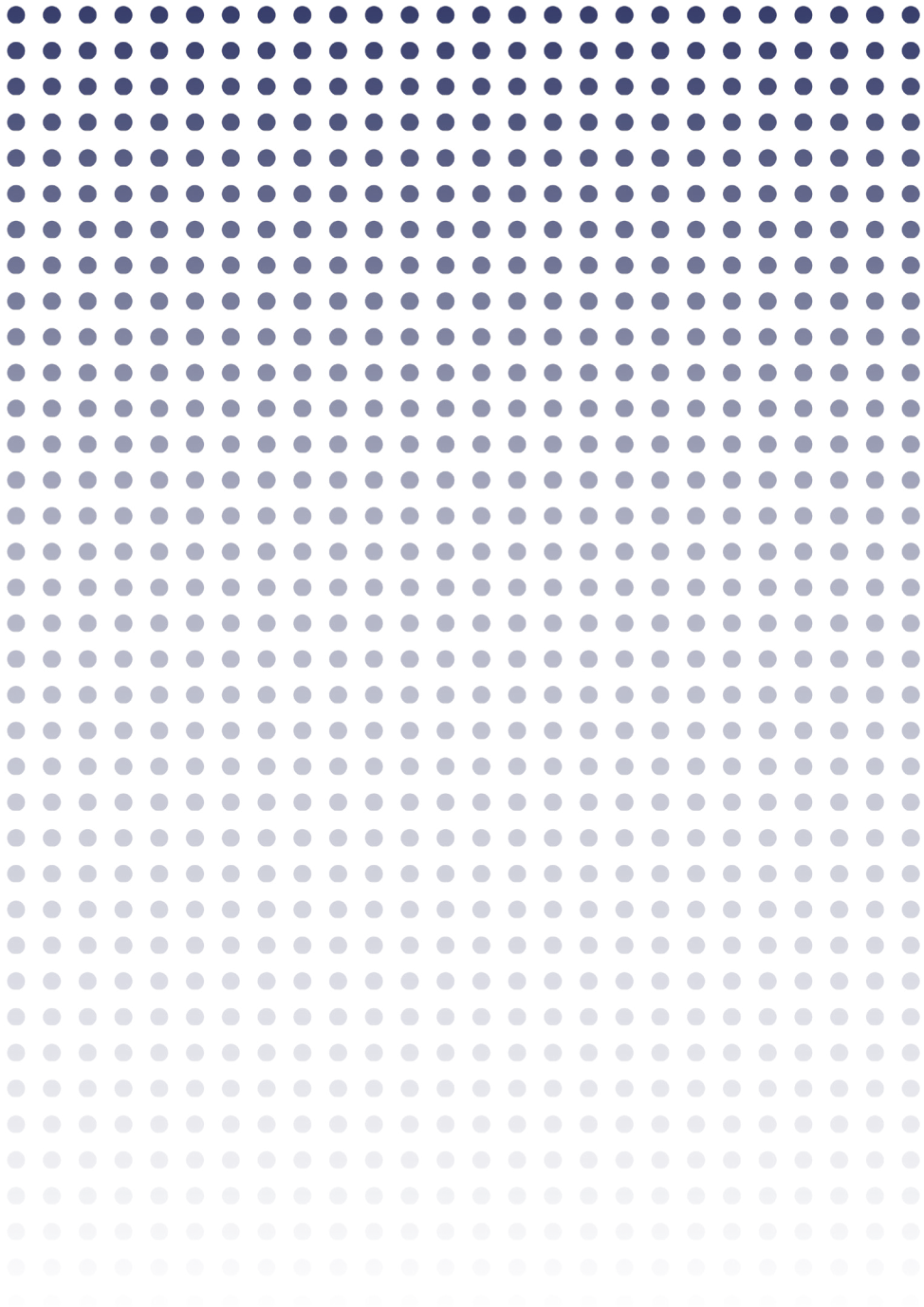
Aishwarya Isha, Suyash Raharia, Sharvari Tambat and Dr. Gaurav Raheja

Original material in this book of abstracts may be reproduced with the permission of the publisher, provided that;

1. the material is not reproduced for sale or profitable gain,
2. the author is informed, and
3. the material is prominently identified as coming from the SMUS India Conference: Book of Abstracts.

The authors are responsible for the contents of their abstracts and ensure that their abstract is original, has not been previously published, and has not been simultaneously submitted elsewhere. The views expressed in the abstracts in this publication are those of the individual authors and are not necessarily shared by the editor or the reviewers.







SMUS Conference India 2023

Partners



Funding Partner



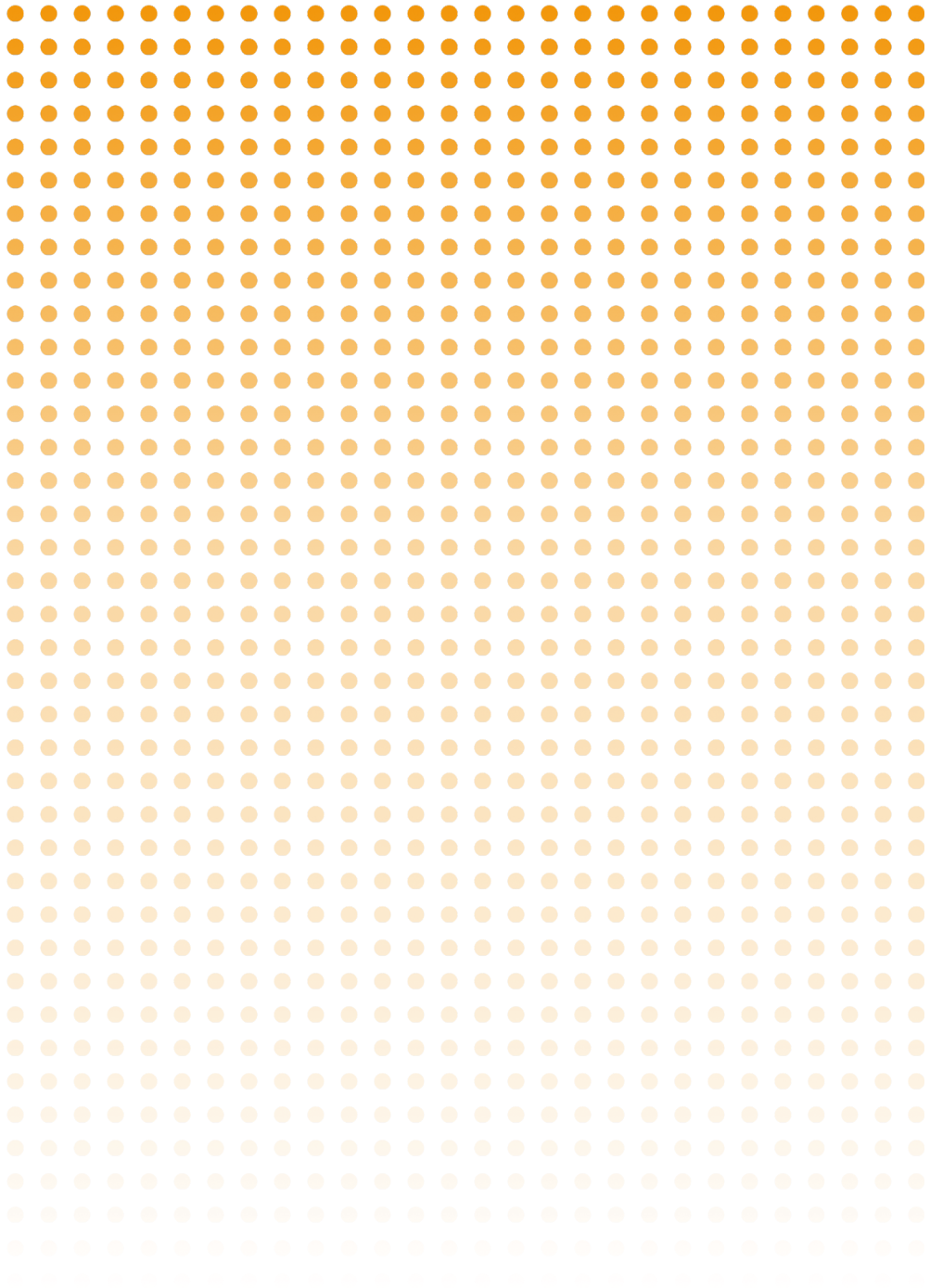
exceed

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

This conference is funded by DAAD with funds from the
German Federal Ministry for Economic Cooperation (BMZ)



Global Center of Spatial Methods for Urban Sustainability





About the Conference

The SMUS Conference 2023 is the third in the series of annual **International and Interdisciplinary Conference on Spatial Methods for Urban Sustainability**. It is simultaneously the “**3rd RC33 Regional Conference Asia: India**”, and the first conference in the series to take place on-site at the **Indian Institute of Technology (IIT) Roorkee, India** from **February 20 to 26, 2023**. The conference is jointly organized by the “**Global Center of Spatial Methods for Urban Sustainability**” (GCSMUS) together with the **Research Committee on “Logic and Methodology in Sociology” (RC33)** of the “**International Sociology Association**” (ISA) and the **Research Network “Quantitative Methods” (RN21)** of the **European Sociology Association**” (ESA).

The six-day conference aims at continuing a global dialogue on **methods** and attracts **methodologists** from all over the world representing diverse **social and spatial sciences** (e. g. anthropology, area studies, architecture, communication studies, computational sciences, digital humanities, educational sciences, geography, historical sciences, humanities, landscape planning, philosophy, psychology, sociology, urban design, urban planning, traffic planning and environmental planning). The conference programme includes various engaging activities including **keynotes, sessions and advanced methods training courses** from various eminent experts around the world. A wide-ranging research papers addressing or sharing methodological perspectives to research social and spatial dimensions shall be presented during the conference deliberations focused on the **Sustainable Development Goals (SDGs)** and **Global South**. Conference sessions aim to engage on general issues of **social science methodology and epistemology** as well as on **qualitative, quantitative and mixed methods approaches**, focusing on the following themes:

1. Transdisciplinary Methods, Decolonizing Methods and Co-Production of Knowledge
2. Analysing Social Inclusion and Exclusion
3. Quantitative, Digital and Mixed Methods
4. Analyzing Social Change and Spatial Transformations

The conference commences with a **PhD day on the 20th of February**, **Seven Advanced Methods Courses** from the **21st to 22nd of February**, followed by the **Main Conference days** from the **23rd to 25th of February 2023** and finally ends with an excursion on the **26th of February 2023**. The PhD Day and the Advanced Methods Courses have been curated with a focus on researchers from diverse fields keeping an **interdisciplinary** outlook.

The conference received an enormous response in the registrations for this event with over **180 abstract submissions** across **30 countries**. Out of the received abstracts, 54 per cent are from female participants and 46 per cent are from male participants. After a series of rigorous reviews and revisions, **152 abstracts** have been accepted and finalized which are now a part of this Book of Abstracts. We truly hope that the conference provides a platform to facilitate lively interactions among the **participants, methodologists, researchers, and young academicians** to exchange ideas on ongoing studies and future collaborative work opportunities.

This SMUS Conference brings together a set of keynotes from a wide-ranging perspective on methods for researching Urban Sustainability from social and spatial standpoints. This includes **Prof. Angela Million** (TU Berlin, Germany) along with **Prof. Gaurav Raheja** (IIT Roorkee) from the field of urban design and urban planning, **Prof. Nina Baur** (TU Berlin, Germany) **Prof. Fraya Frehse** (University of Sao Paulo, Brazil), **Prof. Gabriel Faimau** (University of Botswana, Botswana), and **Prof. Jakkrit Sangkhamanee** (Chulalongkorn University, Thailand) from the domains of social sciences.



Global Center of Spatial Methods for Urban Sustainability

This conference is a result of collaborative efforts between IIT Roorkee and TU Berlin funded through the DAAD Exceed programme. Teams from the **Department of Architecture and Planning** and the **Department of Humanities and Social Sciences** on behalf of **IIT Roorkee** and teams from **GCSMUS** on behalf of **TU Berlin** remain the key drivers of this collaborative effort to organise this conference.

We hope that the conference provides an engaging experience to scholars from all around the world with shared knowledge and perspectives on the various research themes under its organisation.

Prof. Gaurav Raheja

Convener

SMUS Conference India 2023



Acknowledgement

We express our sincere gratitude to everyone who was directly or indirectly involved in bringing the **SMUS conference India 2023** to its new benchmarks of excellence. This would not have been possible without the support, encouragement and guidance of various stakeholders of the conference. In that series, we would like to acknowledge the very kind support and encouragement from **Prof. KK Pant**, Director, IIT Roorkee and **Prof. UP Singh**, Deputy Director, IIT Roorkee for facilitating and providing extensive and wholehearted support. We would like to thank our key collaborators and SMUS Directors **Prof. Nina Baur** and **Prof. Angela Million** for agreeing to choose to host a conference at IIT Roorkee.

We are grateful to the **Dean SRIC** and his office for the smooth coordination of SMUS-related activities. We thank the **Dean International Relations** and his office for their openness and kind support. We could not have undertaken this journey without **DAAD** for extensive financial support through the **Exceed Programme** along with valuable guidance along the way and encouragement for other research initiatives.

SMUS Conference India acknowledges the **Session Organisers** for conceptualising diverse themes for the conference, **Methods Trainers** for providing necessary training for young scholars, **Prof. Gabriela Christmann** for Phd day for guiding and motivating young scholars with various aspects of PhD and **SMUS participants** for their valuable contributions in the form of research abstracts/ publications.

We thank the **Co-conveners** for their constant support throughout the conference. We express our deep appreciation to **Prof. Anindya Jayanta Mishra**, Head of the Department of Humanities and Social for his gracious facilitation and kind support. We are extremely grateful to the **GCSMUS Berlin Team**, for the constant reviews and remote support for administering the conference activities. Last but not the least, **SMUS India Team** for their relentless hard work, dedicated efforts and spirited way of putting this conference all together on the ground.

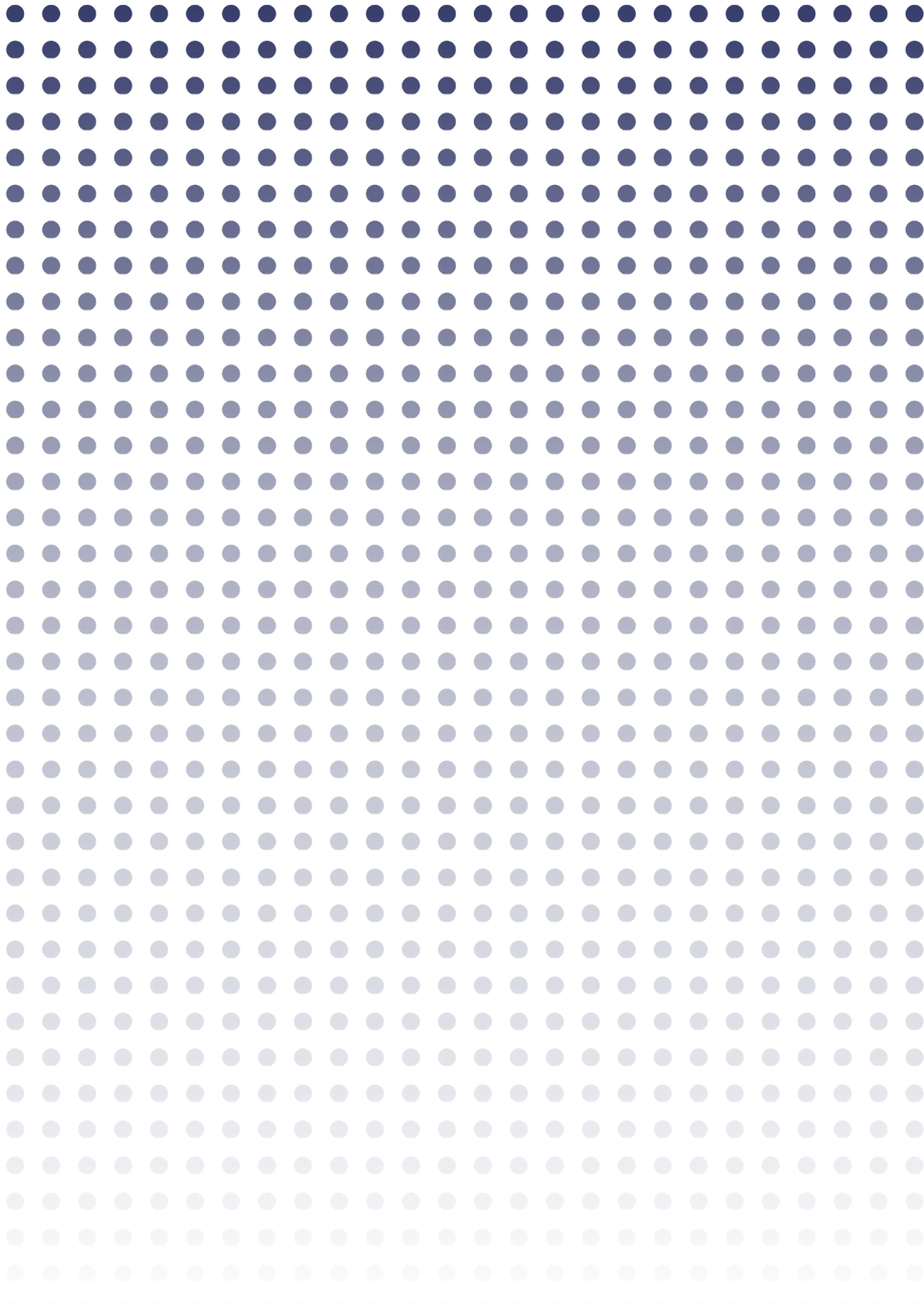
Prof. Gaurav Raheja

Convener

SMUS Conference India 2023

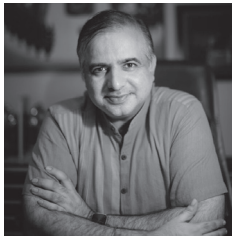


Global Center of Spatial Methods for Urban Sustainability





Steering Committee



Prof. Dr. Gaurav Raheja

Role in Center:

GCSMUS Lead Partner & Action Speaker India Conference Coordinator
Steering Committee

Discipline: Architecture and Planning

University: IIT Roorkee

Country: India



Prof. Dr. Nina Baur

Role in Center:

GCSMUS Director & Action Speaker Steering Committee- India
Conference

Discipline: Methods of Social Research

University: Technische Universität Berlin

Country: Germany



Prof. Dr. Anindya Jayanta Mishra

Role in Center:

India Conference Convener Steering Committee

Discipline: Humanities & Social Sciences

University: IIT Roorkee

Country: India



Prof. Dr. Manish Kumar Asthana

Role in Center:

India Conference Convener Steering Committee

Discipline: Humanities & Social Sciences

University: IIT Roorkee

Country: India



Prof. Dr. Shubhajit Sadhukhan

Role in Center:

India Conference Convener Steering Committee

Discipline: Architecture & Planning

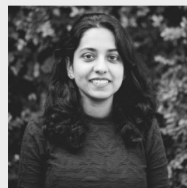
University: IIT Roorkee

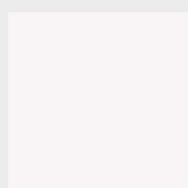
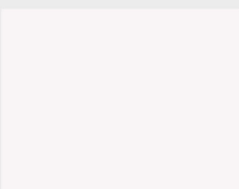
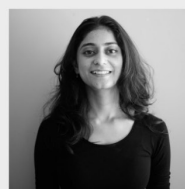
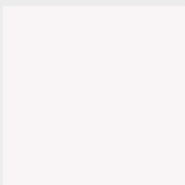
Country: India



Global Center of Spatial Methods for Urban Sustainability

SMUS INDIA TEAM





30
PARTICIPATING
COUNTRIES

United States of America

Colombia

Trinidad & Tobago

Brazil

Germany

Switzerland

United Kingdom

Italy

Macedonia

Morocco

Chad

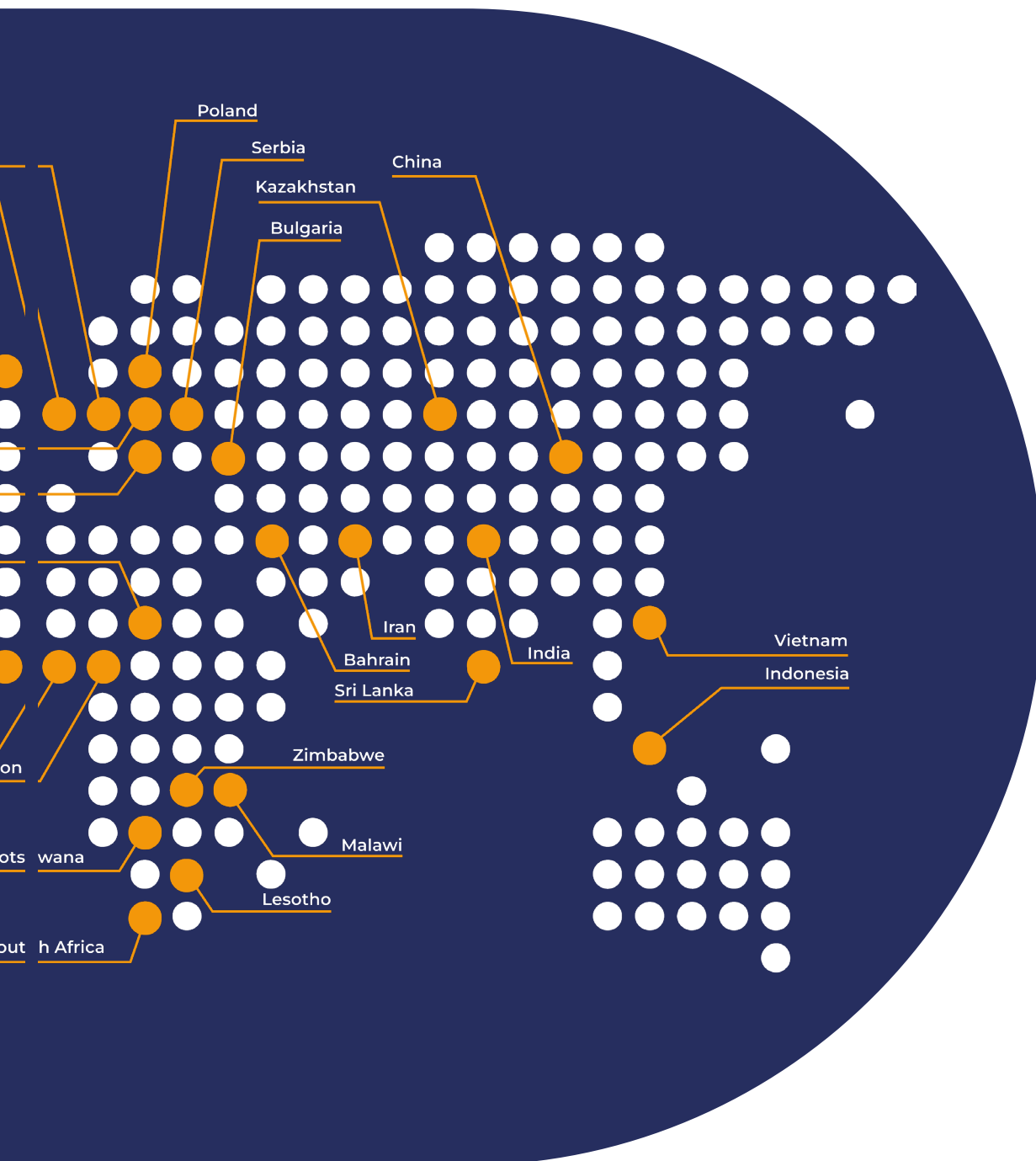
Ghana

Nigeria

Cameroon

Bots wa

Sout h A





Contents

About Conference	i
Acknowledgement	iii
Steering Committee	v
SMUS India Team	vi
International Participation	viii

Session SMUS 23_01

Co-Production (of Knowledge) as Pathway to Decolonization of Knowledge in the Global South	1
01. Coproduction, Decolonization and Development in Africa: Reinterrogating the role of the Social Sciences <i>Edlyne Eze Anugwom</i>	3
02. Co-Production and the Quest for Knowledge Decolonisation in the Global South: Promises, Challenges and Suggestions on Ethics and Methods <i>Pius E. Adejoh</i>	4
03. Co-Production of Knowledge in Qualitative Research: Reflections from Research Practice of Two Projects in the Global South <i>Elettra Griesi, Joanna K. Kiefer</i>	6
04. Compelling Contentions for Developing a Full-fledged Indian Communication Theory –A Meta-theorization. <i>C S H N Murthy</i>	8
05. SPACE JAMS – Mapping challenges of transdisciplinary game jams in architecture and urban planning on the case of the ‘Neighbourhood Curriculum’ Game in the Making <i>Marta Brkovic Dodig, Milena Vasic, Marta Nikolic, Andri Gerber</i>	11
06. The Power of Maps: Assessing the Processes and Outcomes of Mapping Through a Participatory Lens at a Local Level <i>Anupriya Aggarwal, Poonam Prakash</i>	14

Session SMUS 23_02

Decolonizing Social Science Methodology	17
01. Decolonizing Social Science Methodology. An Introduction <i>Nina Baur, Gabriel Faimau</i>	19



02. Rectification of Concept [正名] for Understanding Data Just the Way they are (Theory, discipline or phenomena?) 21
Ngọc Thị Bích Nguyễn, Quynh Văn Trần, Ngọc Hồng Nguyễn
03. Decolonizing Methodology of Historical Science of the Republic of Kazakhstan 23
Gulnara Mendikulova
04. Training Curricula's Contextualization in Social Sciences Research as a Way Of Conquering Self-Confidence of scholars from the Global South 24
Estelle M.KOUOKAM
05. Decolonizing Curriculum and Pedagogy in Higher Education in Nigeria: How Relevant is Co-Production of Knowledge? 25
Idongesit Eshiet
06. Students' Contribution to the Decolonisation of the Psychology Curriculum: Participatory Video Approach in Times of COVID-19. 26
Malefane Kenneth Maine, Claire Wagner

Session SMUS 23_03

- Fieldwork in the Global South – Shedding Light into the Black Box** 29
01. Sampling and categorization of households for research in urban India 31
Katie Pyle
 02. Socio-economic Status of Slum Dweller of Patna: Investigation and Strategies for Sustainable Development Aftermath of Covid 19 32
Ashish Ranjan Sinha
 03. Precarious Waters; Spatializing Agency among Dispossessed Fisher Women of Lake Chilika 34
Amy Brar
 04. Coxswaining fieldwork through the socio-cultural-political mazes in local communities: Account of fieldwork challenges faced by two qualitative policy researchers in India 36
Sneha Swami, Sameer Pendharker

Session SMUS 23_04

- Assessing the Quality of Survey Data** 41
01. Identifying Outliers to Improve Survey Statistics 43
Jörg Blasius, Susanne Vogl

02. Panel Attrition in a Dwelling Panel	44
<i>Alice Barth, Manuela Schmidt</i>	
03. Surveying (in) Pandemic Urban Waterscapes: Challenges and Lessons from a Quantitative Household Survey in Nairobi, Kenya	45
<i>Moritz Kasper</i>	
04. Possibilities and Potentialities of Coalescing Processed Produced Survey data and Elicited Data in Sociology of Deviance	47
<i>Khumo Motshwari</i>	
05. Substance Use Disorders Scholarship in Botswana: A Methodological Overview	48
<i>Lynne C.K. Mosomane, Ndwana Tsimanyane, Gabriel Faimau</i>	

Session SMUS 23_06

Culturally Sensitive Approaches – Potential New Directions of Empirical Research	51
01. Future Directions for Cultural Sensitivity in Societal Development Science	53
<i>Kuba Krys</i>	
02. The Operationalization of Variables in Social Psychology Research on African Realities: A Perspective Towards The Decolonization of Knowledge	54
<i>Henri Rodrigue Njengoué Ngamaleu</i>	
03. A Culturally Sensitive Approach to Measuring Happiness Across the World	57
<i>Kuba Krys</i>	
04. Assessment of Impact of Rivers on Hindu Culture and its Architectural Manifestation in Cultural Heritage: Case of River Narmada	58
<i>Shubhashri Deependu Upasani, Rabi Narayan Mohanty</i>	
05. Confronting the Secular Bias in Researching African Societies	61
<i>Ludovic Lado</i>	
06. Sociological Study of Inheritance using Multi-sited Ethnography: Methodological Reflections	63
<i>Ayushi Dube</i>	

Session SMUS 23_07 & 05 (07-01)

Application of Quantitative Techniques in Spatial Analysis	67
01. Incorporating Urban Analytics to Propose A Framework for Comprehending Public Realm in Self-Organized Settlements of Indian Cities <i>Pradipta Banerji, Aneerudha Paul</i>	69
02. Analytical Identification of Vacant Urban Land (VUL) in Patagonia Argentina: The Case of the Municipality of Camarones, Argentina <i>Mitchell de Sousa, Andrea Schaer, Fernanda Sofia Rodríguez</i>	72
03. Understanding Spatio-Temporal Mobility Patterns for Bus Commuters Using Smart Card Data <i>Parth Mukesh Jhaveri</i>	74
04. Ageing Indicators, Population Growth And Implications for Sub-National Population Projections in Small Areal Units - Evidence from Trinidad and Tobago Census Data <i>Godfrey St Bernard, Hafeeza Hosein Shah</i>	76
05. Tourism Circuit Design for Pedestrians Using Genetic Algorithm – A Case of Bodhgaya, India <i>Namia Islam, Abhishek Kumar, Shubhajit Sadhukhan</i>	79
06. Spatial Distribution of Child Pedestrian Accidents in the Vicinity of Schools: A Case Study of Chennai City <i>Shivani Khurana</i>	82

Session SMUS 23_07 & 05 (07-02)

Application of Quantitative Techniques in Spatial Analysis	85
01. Urban Morphology and Sustainability of Urban Villages- Case Study of Sohana, Mohali <i>Vimal Preet, Toolika Mishra, Dipanwita Panda</i>	87
02. Assessment of Disparity in Infrastructure Distribution in a Region Using Spatial Analysis: A Case of Mumbai Suburban Rail Network <i>Aditya Manish Pitale, Manan Monga, Shubhajit Sadhukhan</i>	89



03. Social Inequality in Household Air Pollution Exposure. A Nationwide Assessment in India 91
Ingmar Ehler
04. Climate Risk Assessment and Mapping of Indian Himalayan Region: An Application of IPCC 2014 Framework of Climate Risk and Geospatial Analysis 93
Aarifah Jan, Shyamasree Dasgupta
05. Investigating the Impact of Urban Heat Island on Surat 95
Atma Deep Dutta
06. Optimal Route Design and Adaptive Route Allocation in Malawi Cities: A Case Study of Lilongwe City 97
Elias Peter Mwakilama

Session SMUS 23_08, 09 & 10 (08-01)

- Ethnography as Spatial-Temporal Method in the (Re)production of Public Space** 99
01. Making Publicness Visible, Walking Tours, a Vernacular Practice of Ethnography 101
Shruti Malik
02. Ethnography as A Method of Research on Urban Public Space: Challenges and Possibilities 102
Akash Jash
03. Spatializing Ethnographic Study to Understand Socio-Spatial Relations in A Contested Public Space; Chaharrah-e ValiAsr in Tehran 103
Maryam Saedi
04. Introducing Equity in Public Spaces 104
Ar. Anjali S. Patil
05. Analysing the Potential of an Urban Recreational Public Space to Function as a Third Place: Case Study of Dighalipukhuri Precinct, Guwahati, Assam, India 105
Barnali Chakraborty

Session SMUS 23_08, 09 & 10 (08-02)

- Visualizing Urban Nature: Ethnographic Approaches and Explorations** 107
01. Visualising Knowledge? 109
Natasha Cornea, Nipesh Palat Narayanan, Surindar Dhesi



02. Imagining Through Images: An Ethnographic Approach Towards Exploring Lakes as Urban Social-Ecological Systems and Thinking Interventions for Change 110
Raktima Ghosh, Aishik Bandyopadhyay, Jenia Mukherjee
03. Visual Grammar of Public Spaces – An Assessment of Play Language Method to Measure Urban Streets as Public Space 111
Madhivadhani K, Dr.Jinu Kitchely Joshula, Sudharsanamurthy P
04. A Visual Narrative on the East Kolkata Wetlands: Towards a ‘Right’ Based Approach 112
Souradip Pathak
05. Urban Transformation through Cultural Co-Production: Psycho-Geography of Fluvial Design 113
Prateek Negi, Upasna Ghale

Session SMUS 23_11

- Multimodal Data Integration for Spatial Research** 117
01. Transdisciplinary Research on Urban Water Resilience: Assessing Flood Vulnerability in Chennai. 119
Dhuravaloshini. M, Amanjeet Kaur
02. Overcoming Information Asymmetry and Data Gaps in Local Area Planning: Case of Jaipur World Heritage City 121
Tanya Chaturvedi Vegad, Pooja Agrawal, Pushpak Bhagwati
03. Challenges of Doing Ethnographic Fieldwork Amongst Subaltern Community Leaders in Delhi 124
Aditya Mohanty
04. Gendered Mobility and Climate Action 127
Vidisha Dhar, Anamika Sarker
05. Politics of Mobility and Data Visualization- A Case of a Four-Lane Road in Himachal Pradesh 129
Vidisha Dhar
06. Building Vignettes: Reflections from Tracing the Lives of Vacant Homes 131
Ibrahim Abdou

Session SMUS 23_12

How Modality Matters? Learning from the Multiplicity of (Non-)Digital Discourse Analytical Approaches 135

01. Is Grounded Theory Research Restricted to Qualitative Analysis? Integrating Topic Modelling as a Device for Theoretical Sampling in the Context of the Analysis of (Media) Discourses 137
Rebekka Damla Atakan
02. Conservation And Utilization of Revolutionary Historical Relics in Nanjing Old City Based on Multi-Source Spatiotemporal Data Correlation 138
Xin Yi, Fei Zhai, Ao Sun
03. Identifying Keywords and Phrases in German COVID-19 Twitter Discourse 139
Julia Schilling, Robert Fuchs
04. Empatica as a Spatial Research Tool: A Systematic Literature Review 141
Arshi Parashar, Harshit Sosan Lakra, Shefna S., Kartik Rathore, Vedankur Kedar
05. Spatial Planning Options to Mitigate the Effects of Urban Heat Islands 142
Vibhu Singh
06. Why Open-Source Data Works: From Tweets to Planning 144
Siddhesh Ravindrakumar Kudale

Session SMUS 23_13

Discourse Analysis, Historical Analysis and Biographical Research: Multi-Method Approaches in Interpretive Empirical Research 147

01. The Challenge of Doing Discourse Analysis of Postcolonial State from Zero Point to the Era of Deep State 149
Domingus Elcid Li
02. A Necessary Multi-Method Approach for Analysing Socio-Historical Power Processes in the Paraguayan Chaco from Indigenous Women's Perspective. A Biographical and Discourse Analysis. 151
Victoria Taboada Gómez
03. Combining Autoethnography and Narrative Inquiry to Explore Vietnamese Japanese Teachers' Experiences and Identity 153
Ngoc Hồng Nguyễn



04. The Language and Discourses of Real Estate Agent Promotion and its Consequence in the Real Land use of the Urban Sprawl: The Case of Trelew, Argentina 156
Mitchell de Sousa

Session SMUS 23_14

The Individual and the City: Urban Life Stories 159

01. From Classical Sociological Theory to Southern Urbanism: Changing Conceptions of the (relationship between the) Individual and the City 161
Lanka Adarsh
02. The Memory of the Shelter as a Social Organization: The Ilam Residents' Narrative of a City-in-War (Iran-Iraq War) 163
Shamin Golrokh, Sima Ferdosian
03. Invisible Yet Invincible: Narratives of Resilience Among Post-Partition Refugees in India 165
Rachna Mehra
04. Home-Making on the Streets of Delhi 167
Khushboo Jain
05. The Space-Time Matrix of Commemorative Street Renaming in Eastern Germany 170
Seraphim Alvanides, Isabelle Buchstaller
06. Multilingualism, Mobility and Space in Urban Public Environments in Southern Africa: Reflecting on Methodological Improvements 172
Victor Chikaipa

Session SMUS 23_15

Measuring Change in Urban Space(s) 175

01. The Cologne Dwelling Panel – A Methodological Approach to Measure Neighborhood Change 177
Manuela Schmidt, Alice Barth, Jörg Blasius, Rebekka Atakan
02. Spatio-Temporal Analysis of the Urban and Social Fabric of Bombed Cities in Germany: Nuremberg and Essen from the 1940s Onwards 178
Seraphim (Serafeim) Alvanides, Carol Ludwig

03. Assessment of Experimental Trade-Off Approach to Mitigate Climate Change through Urban Planning Actions Transforming Development Regulations to modify the Micro Climate	180
<i>Sudharshanmurthy P., Chandramathy I, Madhivadhani K.</i>	
04. Monitoring of Spatiotemporal Urban Expansion of Delhi Using Geomatics Techniques	181
<i>Gaurav Kumar Mishra, Amit M. Deshmukh</i>	
05. Approaching Urban Housing with Biophillic Patterns	183
<i>Nitin Kulkarni, Muthaiah Kathiresan, Emline Madonna</i>	
06. Patterns of Urban Transformation of Pune City: A Case of 30 Years	185
<i>Urja Rahul Shah, Urja Rahul Shah, Amruta Garud</i>	
07. Soundscape Analysis of an Indian City (Sonipat) Using SSID Protocol and Regression Models	187
<i>Pritam Lenka</i>	
08. Understanding Gentrification in Indian Cities	188
<i>Rahat Varma, Suruchi Modi</i>	
09. Evolution of Urban Morphological Studies and Techniques of Measuring Morphological Transformations	190
<i>Purba Biswas, Priyanka Dey</i>	
10. Spatial Analysis of Student Zone Using Geographic Information Systems (GIS): A Case Study from Dehradun	193
<i>Dikchha Tiwari, Uttam Kumar Roy</i>	
11. Assessing Urban Safety and Comfort of Urban Public Spaces for Sustainable Urbanization; Case Of Colombo, Sri Lanka	196
<i>Janaka Wijesundara, Ahranyakumari Kumaraguruparan, Nimali Aththanagalla, Clarence Dissanayake, Gayathri Kaushalya</i>	
12. Environmentally Sensitive Areas: A Paradigm for Designing Greenway Corridors	199
<i>Bhuvaneswari.R, Neethu M.S</i>	

Session SMUS 23_16

The Longue Durée in the 21st-Century Social Sciences	203
01. The Longue Durée in the 21st-Century Social Sciences - Methodological Challenges of Analyzing Long-Term Social Processes. An Introduction	205
<i>Neethu M.S, Fraya Frehse</i>	



02. Caste as Cultural Heritage: Contextualising Ambedkar's Views on a Musahar Settlement in Urban Varanasi 206
Anil Kumar Patel
03. Decolonising Archaeological Heritage Management: The Long Path to Inclusivity and Holistic Conservation Approaches in Zimbabwe. 208
Nyasha Agnes Gurira, Mabgwe Malvern
04. Investigating and Establishing Inte-relationships between Craft and Interior Architecture: Exploring Conceptual Framework and Historiographical Account as Prospective Methods for Conducting this Transdisciplinary Research 209
Smriti Saraswat, Gaurav Raheja

Session SMUS 23_17

- Design Methods for Accessibility and Social Inclusion** 215
01. Universal Design for Urban Spaces: The Case of Institutional Area in Sitapura, Jaipur, Rajasthan 217
Pooja Agrawal, Pushpak Bhagwati, Tanya Chaturvedi Vegad
02. Technical Assistance for Social Housing: Reflections from Two Experiences in the State of Rio Grande do Sul – Brazil 218
Josiane Andréia Scotton, Luciana Inês Gomes Miron
03. A Path towards Conscious Inclusive Design Decisions 221
Pratistha Sharma
04. Methodological Framework for Assessing Independence and Quality of Life (QoL) Indicators of Indian Elderly in Urban Neighborhoods 222
Iram, Gaurav Raheja
05. Moving beyond 'tokenism': Methodological challenges and opportunities of researching children's everyday mobility experiences in India 224
Megha Tyagi
06. Living Wall Participatory Design and Construction Method – Educational Game Tool for Child-Friendly School Environments 226
Mina Radić Sibinović, Marta Brković Dodig

Session SMUS 23_18 & 26

Joint Methodological Challenges for Spatial Planning and the Social Sciences Regarding Social Equity 229

01. Navigating Methodological Misunderstandings and Conflicts in Urban Planning Research Using Heuristics and Typologies from Social Sciences Methodology 231
Jacques du Toit
02. Planning Practices and Social Theories Communication When Social Realities Are Complex Enough – Case Of Viet Nam National Master Plan 232
Lân Ngọc Cao, Phương Ngọc Mai Phan
03. Depoliticize Planning Through Application of Mixed Method in Spatial Case Selection. Case study: Less Developed Regions of Iran 235
Samaneh Niazkhani, Esfandiar Zebardast, Angela Million
04. Territorial, Cultural, And Natural Diversity, The Basis for Effective Management of the Urban-Rural Gap in Land Use Planning 237
Gisela Paredes-Leguizamón, Juan Carlos Troncoso, Jovanny Mosquera Pino, Aristarco Mosquera
05. Research With Street-Dwelling Children and Youth: The (Methodological) Tension Between Research Ethics and Prevailing Laws of the Country 239
Khushboo Jain
06. Area-Based Development of Smart City Mission and Intra-City Inequality: Case of Lucknow City 242
Shikha Puri, Uttam Kumar Roy

Session SMUS 23_19-01

Analysing Hidden Forms of Violence and their Spatialities: The Methodological Challenges of researching on Invisibilised Group 245

01. Male-Centric Sociology? Acknowledging the Women's Scholar's Contributions in the Domain of Sociology 247
Ghurni Bhattacharya
02. Digitalization and Political Participation: Methodological Challenges of Decoding Digital Progress and Gender Divide 248
Binitha V Thampi



03. Indigenous Women and Work: The Lived Experience of Indigenous Women in Tripura, Northeast India 250
Linda Uchoi
04. Visual and Performing Arts as a Design Research Tool for Interpretation and Accomplishment of Transgender Inclusivity Goals 252
Deeptam Das, Maathangi Venkatraman, Ar. Rizwan Kazmi

Session SMUS 23_19-02

- Analysing Hidden Forms of Violence and their Spatialities: The Methodological Challenges of the Research on Intimate Partner Violence and Sexualized Violence** 257
01. Methodological Challenges and Sine Qua Nons for Research on LGBTQ+ Inclusion in Public Spaces 259
Adarsh K. Verma, Devu Rajeev
02. Sexual Violence: Ethnophenomenological Analysis of the Experience of Affected Persons 261
Frederike Julia Brandt
03. Depoliticization of Female Body; Cultivating the Spatiality and Temporality of Violence against Women in Contemporary Iran 262
Nassim Mehran
04. Challenges in Intersectional Violence Research: Insights from the Study “Violence Prevention Among Particularly Vulnerable Groups of Survivors Affected by Domestic Violence” 263
Olivia Frigo-Charles

Session SMUS 23_20

- Spatial Methods in Healthcare Research** 267
01. Introduction: Space – Spatial Methods – Healthcare Research 269
Cornelia Thierbach, Lorena Dini
02. Need to Rethink ‘Access’ to Healthcare Facility: Perspective from Kasaragod district, Kerala, India 270
Anupama K, Saikat Kumar Paul
03. Spatial Distribution of Urban Population, Population Densities, and COVID-19 Cases in Indian states and Union Territories 272
Adithya Bandari, Ravi Kant, Shubhajit Sadhukhan



04. Layering Digital Perceptions: Mandatory Covid-19 Vaccination Operation and Post-Covid-19 in Lesotho 275
Matlotlisang H. Tjabaka-Mokapane, Masemote G. Molale
05. Behaviour Mapping Approach for Identifying the Barriers to Inclusive Outdoor Physical Activity for Women in Public Parks 278
Nagabhoina Tejendra, Gaurav Raheja
06. COVID-19 and Cities: The Debate on Density and Survival of the Cities 279
Pratik K. Singh

Session SMUS 23_21-01

- Methods for Analyzing the Economy 1: Rural-Urban-Relations, Spatial Transformations and the Economy** 283
01. (Re) Searching Interdisciplinary and Methodological Frameworks to Bridge the Gap in Planning, Industrialization and Urbanization 285
Pritpal Randhawa, Rachna Mehra
02. Assessment of the Impact of the Industrial Area on the Quality of Life in the Nearby Residential Area: A Case of Kanjikode 287
Sisira P, Anil kumar P P, Bimal P
03. Shifting Gears: Business Plan as New Planning Approach for Peri-Urban Landscape 288
Yajan Chaudhary
04. Rural-Urban Transformation in Central Java, Indonesia: Trend of Density, Land Demand, and Land Supply 290
Iwan Rudiarto
05. Transdisciplinarity through the Research-Action Project on Urban Agriculture (Casablanca – Morocco) 291
Fouad Amraoui, Undine Giseke, Kathrin Wieck

Session SMUS 23_21-02

- Methods for Analyzing the Economy 2: The Informal Economy** 295
01. Okoetile: Farmer/herder Crisis and Urban Fringe Farming in Ibadan, Nigeria 297
Temitope Yetunde Bello
02. Doing Research in the Informal Sector and Among Mobile Populations: Experiences from Accra, Ghana 299
Steve Tonah



03. Development of Socio-economic Spaces of Urban Villages in India: A Case of Sohana Urban Village, Mohali 301
Vimal Preet, Saloni Mehta
04. Social Realm of Indian Streets: Understanding 'Informality' for Designing Streets as Social Public Spaces which Respond to the Local Context; Case: Bengaluru, India 303
Ahalya Vedaparayana Gandikota
05. Innovative Perspectives on Qualitative Research for dealing with IT Sector Complexities 305
Ishani Vajpai

Session SMUS 23_22

- Methods for Studying the Spatial Dimension of Infrastructures** 309
01. Mapping Internet Infrastructures: Spatial Imaginations and Visual Representations 311
Silke Steets
02. Making and maintenance of Mumbai lakes' watersheds as infrastructure 312
Shashank Deora, Pankaj Sekhsaria
03. Public Open Spaces as Urban Cultural Infrastructure: Theoretical roles and Methodological Framework 314
Yuxian Chen, Daixin Dai
04. From the River, Towards the City: A Creatively Critical Mapping of the Graffiti and Visual Pluralities of the Varanasi Ghats 316
Subhradeep Chatterjee

Session SMUS 23_23

- Digitalization, Political Participation and Transformation in the Global South** 319
01. Online Media Research: Exploring Social Media Analytics and Digital News-Media Coverage of 2019 Malawi Elections 321
Anthony Mavuto Gunde, Jimmy Kainja
02. Netnography in Social Networking Sites – An Exploration of Cybercultures in Consumer Groups 322
Sonali Srivastav, Shikha Rai



03. Gentrification, Square Dancing and the ‘White House’: Social Media and the Production of New Public Spaces in Guiyang, China 323
Cheng Zhang, Jung-Che Chang
04. Coping with Gatekeepers in Digitalized Political Participation Research 324
Langtone Maunganidze
05. Loss of Control in Digital Urban Planning? Investigating the Role of Digital Tools and Algorithms, their Challenges and Possibilities for (Participatory) Planning Processes 326
Gabriela Christmann
06. Participatory Spaces, Urban Governance, And Citizen Participation in the Indian Smart Cities of Bhubaneswar and Bhopal 327
Maitrayee Mullick, Archana Patnaik

Session SMUS 23_24

- Cross-Cultural Research Methods in Community-Oriented Approaches in Human Behavior** 329
01. Socio-Cultural Behavioural Perspective and WASH Practices in India 331
Dipak Abnave
02. Developing Sustainable Solutions at Intersections: For Community Health and Well-Being 332
Ulrike Fettke, Susanne Ferschl, Prof. Elisabeth Wacker
03. Satellite Towns: Urban Design and Planning and Provisions for Mental Health - A Road Forward with the Case of Navi Mumbai 333
Suvarna N. Thakare, Subhankar Nag
04. Integration of MCDM and GIS techniques for Community Flood Resilience Assessment 337
Naveen Prashar, Harshit S.Lakra
05. Analysing Residential Segregation- Case of Cities in Kerala 337
Dimple Maria, Nidhish P J
06. Analysis of Spatial Dependence Between Sanitation and Stunting in India 339
Debasree Bose



Session SMUS 23_25-01

Methods-Intertwining in Teaching, Research, and Practice	343
01. Experience and Teaching: What does MOOC's Collective Production Tell Us About Spatial Methods? <i>Inês Martina Lersch, Luciana Inês Gomes Miron</i>	345
02. Improving Spatial Cognition Abilities: Some Reflections from International Joint Design and Planning Studio Program – Diponegoro University, Indonesia <i>Wiwandari Handayani, Santy Paulla Dewi, Artiningsih Artiningsih</i>	347
03. Bridging the Gap Between Research and Practice: An Exploratory Qualitative Study of Urban Planning Practice and the Factors Influencing Practitioners' Use Of Research <i>Jacques du Toit</i>	349

Session SMUS 23_25-02

From Cases and Actors to Action and Implementation	351
01. Making of Creative and Knowledge Cities – Lessons Learned in Skopje <i>Ogden Marina</i>	353
02. Street-level Acoustics as a Measure of Liveability of Sustainable Urban Neighborhoods <i>Mamatha P Raj, Dakshayani R Patil</i>	355
03. Resilient Space Strategies from Emergencies <i>Ludovica Gregori</i>	358
04. Investigating Causes of Transportation Bottlenecks: A Case Study in the City of Pune <i>Samruddhi Sachin Purohit, Prof. Amruta Garud</i>	359
05. Potential for Reducing Energy Demand in India's Residential Housing through Retrofit Measures <i>Shalini Keshri, Priyanka Dey</i>	361



SMUS 23_01

**Co-Production (of Knowledge) as
Pathway to Decolonization of Knowledge
in the Global South**

Session Organisers:

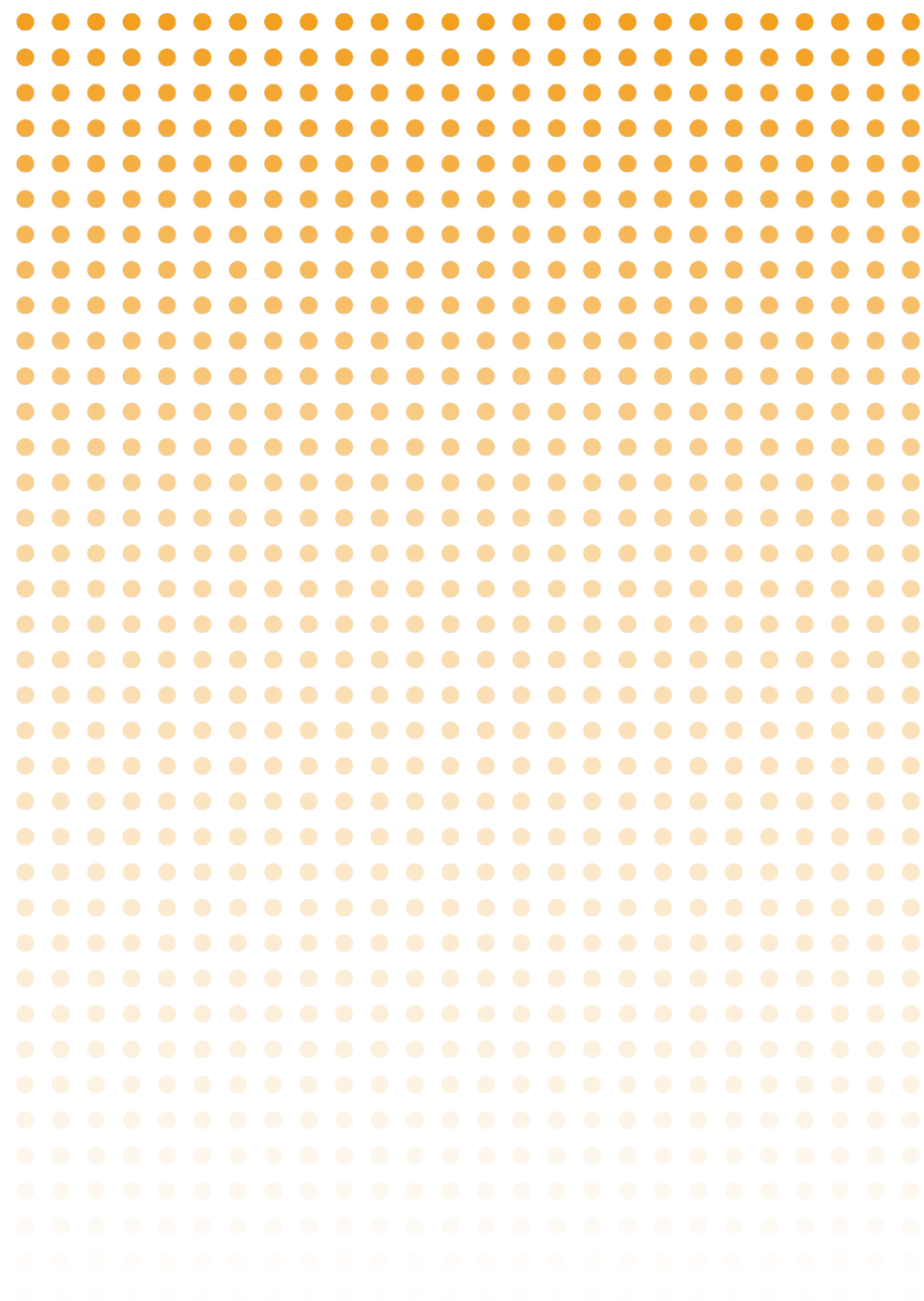
Edlyne Anugwom

Professor, University of Nigeria

Pius Adejoh

Associate Professor, University of Lagos





01

Coproduction, Decolonization and Development in Africa: Reinterrogating the Role of the Social Sciences**Keywords:** Co-production; Knowledge; Africa; Social Sciences; DevelopmentEdlyne Eze Anugwom ¹*(1) University of Nigeria, Nigeria*

The paper interrogates the dynamic relationship between decolonization of knowledge and prospects of sustainable development in Sub-Saharan Africa. It argues that beyond the robust promotion of decoloniality and elaborate celebration of new 'isms', the social sciences should aspire towards being the loci of coproduction of knowledge that realistically captures the African experience and realities. Such knowledge pursuit should be anchored on epistemologies that embody the African reality. However, for the above lofty goals to be met, the social sciences need to be retooled and repurposed to achieve conviviality with both Western epistemic traditions and Africa's indigenous knowledge systems that could resonate with both development aspirations and development challenges of the continent. There is no gainsaying the fact that decolonization of knowledge in Africa is anchored on the undeniable premise that while some level of political decolonization may have been achieved, knowledge production systems and values related to them are still entrapped in the clutches of colonization and this is especially the case with the social sciences. However, a critical but broad approach to repositioning the social sciences to tackle the development challenges of Africa is to seek to avoid the production and reproduction of a system that largely promotes disarticulation or dislocation of knowledge and thus disembodies the viability of the social sciences to the African development challenge. In addition, the social sciences must dig deep and reinvent the epistemological foundations of African knowledge systems and empower these to solve African existential challenges. Equally, social sciences must act towards democratizing knowledge both as a route to decolonizing knowledge and projecting the diversity of avenues towards knowing or multiple epistemologies.

02

Co-Production And the Quest for Knowledge Decolonisation in the Global South: Promises, Challenges and Suggestions on Ethics and Methods**Keywords: Co-production; Knowledge Decolonisation; Methods; Ethics; Global South**Pius E. Adejoh¹*(1) University of Lagos, Akoka, Nigeria*

Knowledge co-creation or co-production in the context of knowledge decolonization, especially, has continued to gain traction in decolonial scholarship. This is coming against the backdrop of the continued dominance and claim to universality of the western knowledge system at the expense of other knowledge systems, and of the need to construct and legitimize other knowledge systems by exploring alternative epistemologies, ontologies and methodologies. The Suppression of alternative knowledge systems through the hegemonic dominance of the western knowledge system also robs society of the contributions they can bring to bear in generating the understanding of the world in the face of diverse menacing global challenges, and limits collective social progress, at large. For the global south, in particular, it robs them of their ways of being and knowing, and the opportunity to rewrite their histories, reassert their dignity and refocus the knowledge production and worldviews for the sake of the present and the future.

Central to the notion of knowledge co-production in the light of knowledge decolonization is also the need to decolonize research methodologies through a more critical understanding of the underlying assumptions, motivations, and values that inform research practices on the part of the researcher and reflect the concerns and world views of non-Western individuals, and respectfully knowing and understanding theory and research from their perspectives. Knowledge co-production methodology involves a horizontal partnership between researchers (both academic and non-academic) and active research participants to undertake research that can inform action. Co-produced research tackles unequal power dynamics, challenges existing knowledge production hierarchies, ensure more equal partnerships and shared decision making, emphasizes reciprocity, promotes mutual capacity strengthening, ensures greater reflexivity, and enables flexible ways of interacting and working across the research cycle. This approach promotes cross-transfer of skills by generating or documenting scientifically valid information and strengthening indigenous knowledge and systems, with recognition of the value of indigenous knowledge and systems.

Knowledge co-production also involves challenging existing ways of knowledge production, including hiring people for data collection, but limiting their ability to contribute to analysis; it involves sharing decision-making power in new ways, or engaging research participants as more than just sources of data.

However, while knowledge co-production offers fresh relief about the exercise of knowledge production, there are concerns among a section of the knowledge production community regarding the most appropriate methods to be adopted in knowledge co-production especially in the context of knowledge decolonization, just as there are concerns about issues of objectivity, rationality, and empiricism which the traditional method of knowledge production emphasize.

There are also ethical concerns about the knowledge co-production process bordering on ownership and intellectual property, objectivity and maintenance of the scientific method, power imbalances, and conflicting agendas, many of which have continued to be dealt with on an ad hoc and in situ basis.

This paper discusses the promises offered by knowledge co-production as a tool for the decolonization of knowledge in the global south, and for generating a more balanced and just understanding of the world in the face of its diverse challenges. More importantly, the paper examines the fears, challenges, and limitations of this approach to the production of valid and reliable knowledge, discusses models or methods for knowledge co-production in the context of decolonization, and examines some ethical issues or values that should guide knowledge co-production. The paper draws from an extensive review of literature on the subject of knowledge co-production and decolonization to demonstrate the beauty and intrinsic value of integrating other knowledge systems in knowledge production and provides insights on how to navigate past the important scientific questions of ethics and methods in knowledge co-production especially, in the context of knowledge decolonization in the global south.

03

Co-Production of Knowledge in Qualitative Research: Reflections from Research Practice of Two Projects in the Global South**Keywords:** Participatory Research; Grounded Theory Methodology; Knowledge Decolonization; Equity; PoitionalityElettra Griesi ¹, Joanna K. Kiefer ¹*(1) Institute of Geographical Sciences, Free University Berlin, Germany*

Researching in the Global South challenges researchers to deal with power relations and knowledge systems, to reflect on them and to develop an approach that does justice to good research in the sense of decolonization of knowledge. In recent years, it has become increasingly evident that research is not sufficiently directed or guided by indigenous or local communities, nor does it equitably include the local knowledge systems, nor does it adequately address the needs and concerns of communities. Thus, a power imbalance becomes evident and, with it, the necessity to look critically and reflexively at one's own research methods and to adapt them if necessary. Based on two empirical research projects, this paper shows and discusses at which stages in the research process one can speak of co-production of knowledge and how this can be actively targeted. We question whether the approaches presented can generate a co-production of knowledge in the sense of decolonisation of knowledge in the Global South and what preconditions must be met for this to happen.

With the term co-production of knowledge (CPK), we mean a process that brings together local knowledge systems and scientific knowledge systems to generate new knowledge and understandings of the world that would likely not be achieved through the application of only one knowledge system. In this sense, CPK is aimed to gain a broader, deeper, maybe new but hopefully more valid understanding of the object of research. Not only should the research context and its knowledge production and knowledge structure be taken seriously, but also an approach of co-production of knowledge should be pursued or, as stated in the Call for Abstracts, the goal is to "demystify the researcher as an all-knowing person and elevate the subjects beyond passive" (Call for Abstracts).

Based on own research activities in the field of cultural geography / spatial co-production (and transformation) research in Dakar (Senegal) and sociology of religion / urban religiosity research in Havana (Cuba) the proposed paper shows, first of all, where we locate processes of co-production of knowledge in the research process and which research methods and approaches best respond to the co-production of knowledge in the frame of our research projects.

The PhD project in Dakar, Senegal, investigating the impact of spatial co-production processes on social inequalities builds on 8 months ethnographic (qualitative) fieldwork. To avoid a distinction between researcher and researched that can challenge the separation between those who produce new knowledge and those who might either benefit from or be harmed by that knowledge; to advance greater equity (a precondition for CPK), justice and transparency toward the research partners; to make a contribution and get a deeper understanding of the problematics that hinder the development of the community taken into consideration; and, finally, to rely on more inclusive methods, participatory research (sometimes referred to with the term of research co-production) was conducted.

According to participatory research, community members had a significant degree of participation and control during the research process and helped to identify the problems to be studied and determine the major questions and overall design of the research. In addition, their popular knowledge, personal experiences, feelings, and spiritual expressions feed into the research and were useful ways to generate knowledge that reflect the perspectives, cultures, priorities, or concerns of the community in question. Given that the fieldwork followed a cyclical process of (participant) observation, (informal) conversations, reflection, first evaluation, and modification, the participatory research allowed to develop and apply approaches that best fit into their daily routines and practices, their values, their understanding of community problems and gender issues, roles divisions etc.

While a high degree of community participation during the fieldwork led to a more inclusive knowledge production, some challenges characterised and endangered the field research to some extent (e.g., internal conflicts about power and domination within the project, the tendency to gain individual control over the project, cultural biases that implicitly shaped the design and execution process in ways that are inequitable or exclusionary, which then silenced certain viewpoints or produce misrepresentative data etc.). Thus, a new form of power imbalance resulting from the chosen approach is generated among some of the community members. These experiences represent the focus of a deeper reflection and are discussed in the frame of the conference.

In the second research project on religious pluralism in Havana, Cuba, an ethnographic field approach was also chosen, which is complemented by group discussions. The research process is based on the circular logic of grounded theory methodology. This example will be used to discuss which possibilities of co-production of knowledge can be used especially in qualitative interpretative and reconstructive research. It is argued that, on the one hand, a co-production of knowledge is already contained in the methodology of the interpretative and reconstructive paradigm. Following Alfred Schütz (1980), for example, it is reflected on the extent to which scientific knowledge and everyday knowledge are already in such a Co-Production of knowledge relationship. On the other hand, the problems arising from the findings of postcolonial theory will be discussed in relation to epistemology and hegemonic knowledge and research in the Global South. For this purpose, the circular logic of the Grounded Theory Methodology (GTM) serves as another starting point. In GTM, a movement of knowledge production is already accomplished through the circularity of theory and empiricism (e.g. Glaser, B. / Strauss, A. 1980). It is asked whether this circularity can be complemented by a further movement of circularity between subjects of the Global South and researchers by consciously putting first research results up for joint discussion, including systems of relevance of the field and always consciously aiming for a fluctuation between the knowledge of the field and the research. In the specific case, an example is discussed in which a condensed form of interpretation in the form of photography was used as an impulse in group discussions.

Based on the observations from the two research projects, we consider what conditions must be fulfilled in order to speak of co-production of knowledge. In particular, we believe that the question of positionality and the production of justice in the field plays a central role. Finally, we return to the initial question and critically ask to what extent this can contribute to a co-production of knowledge and, in the sense, to a decolonisation of knowledge.

04

Compelling Contentions for Developing a Full-fledged Indian Communication Theory – A meta-theorization

Keywords: Indian Communication Theory; Mindful Journalism; Peace Journalism; Melodrama; Proppian Elements of Folk tales; De-Westernizing Media Studies; Commensurability/Incommensurability

C S H N Murthy ¹

(1) Paradigm Institute of Media and Film Studies, India

The paper intends to raise two compelling and pertinent questions as to the methodological approaches being pursued in media and communication research in India. The paper also calls for an in-depth discussion among Indian media academics about the issue of blindly applying Western media and social theories to the problems plaguing Indian media and society. Evidence for this contention emerges mostly from an analysis of theses data available on the Indian UGC website of Shodhganga¹. The author argues that the problems of Indian society and the media should be addressed from within the parameters and variables of Indian culture, tradition, and ethos. Frankly speaking, Western social and media theories have also emerged from within the frameworks and parameters of respective countries' cultures at some time back. It is also a fact that these Western theories have not been developed or formulated keeping in mind (the intellectual plane) the entire world in general or India in particular. While the relevance of these Western theories to the entire globe stands as a big enigma, which has not yet been fully addressed to a logical end across the globe, these so-called Western theories together have, unfortunately, been dubbed as 'dominant paradigm'.

It is important to realise that Europe's countries, which don't even have as many people as a district in India (which is the size of a sample of the Universe), have contributed at least one social or media theory to the field of knowledge. At the same time, India, which has the second most people in the world, hasn't really added much to social or media theories that are worth mentioning in its research papers or theses. For example, the author wants to talk about this part of what Europe has brought to social and media theory. Everyone knows that "peace journalism" was innovatively put forward first by Professor Johan Galtung, a leader in social science academics from Norway, a tiny nation in Europe. But how many Indian academics, scholars, and media students know that Johan Galtung (1985, 1996) was a pioneer in developing this theory from the perspectives of Eastern philosophy, including Buddhism, Confucianism, Daoism, and Hinduism (Gunarante et al., 2015)? Everyone knows that Buddha and Gandhi were the apostles of peace in India. Another classic example for developing social and media theories from native cultures is that of Vladimir Yakovlevich Propp, a Soviet folklorist and literary scholar, who offered for the first time the basic structural elements of Russian folk tales. These irreducible structural units later came to be known as the primary requirements of a fiction, be it a drama or a film.

Around the turn of this century, three characters of Sri Lankan origin who started their careers as journalists—Dissanayake (1983), Gunaratne (2007), and Seneviratne (2012)—have successfully related the basic tenets of Buddhism to journalism and mass communication. Ironically, the Marxist ideologues in India have reduced Buddha and Buddhism to a simple individual and individualistic ideology, depriving him of the Hindu religious aura and its philosophical annexation to his Realization. Thus, Indian scholars have lost the opportunity to exploit the most convenient school of Buddhist thought for developing a media or journalistic theory. The work of the above cited three Sri Lankan scholars has come to be known as "Mindful Journalism," which in many aspects is more relatable to India than Johan Galtung's Peace Journalism. Warren Buckland (2012) writes that, according to Peter Brooks, 'the origins of melodrama can be accurately located within the context of the French Revolution and its aftermath' (1995, 14-15). Brooks added that 'this is the epistemological moment which it illustrates and to which it contributes: the moment that symbolically, and really, marks the final liquidation of the

traditional sacred and its representative institutions (Church and Monarch), the shattering of the myth of Christendom, the dissolution of an organic and hierarchically cohesive society, and the invalidation of the literary forms—tragedy, comedy of manners—that depended on such a society’. (1995). This is enough to prove how academics and social scientists in Europe and the West are keen to develop and write theories about the happenings around their times.

The problem ailing Indian academia is that its academics as well as students engaged in the study of sociology and communication do not go through the circumstances under which Europe or the West developed the theories relevant to their societies. In his publication on the unbearable lightness in Indian media research (2016), published in the *International Communication Gazette*, the author of this work wrote: Western scholarship has encountered this problem in a different way. Jensen and Neuman (2013) observed that despite the historical limitations associated with the ‘effects theories’ (of Laswell, Hovland, and Berelson), many scholars still tend to apply them to interpret the current media phenomenon in the digital era, and many to many communications through social media (p.231). It is also very pertinent to note the observation of Thomas Hanitzsch (2008) who wrote that, ‘while observing that cross-cultural research in journalism is immensely helpful in addressing compatibility issues between media systems of different nations, he wondered how the conventional Western values of objectives of journalism fit with non-Western cultures (p.94).

Initially the US scholars have rejected the media’s ability to produce ‘strong effects’ following Paul Lazarsfeld’s ‘two step flow theory’ (1955). However, in the course of time, it evolved so that there was a return of ‘strong effects theory’ which is continuing to dominate the film world even today. George Gerbner was a strong supporter of Laswell’s ‘strong effects theory’. His Cultivation Theory was based on ‘Strong Effects of Media’ only. Today, a number of theories in Visual Communication are ‘strong effects’ models by and large. On Aug 19, 1992, George Gerbner declared it as: “I came to the conclusion that communication is really where the action is—political action, social action, cultural action”. This shows that the “strong effects” of media and communication never stop and continue to have their own effect on the larger masses. It opens up one of the two questions that the author has spoken about in the beginning of this paper. If any of the Western models of Communication is relevant to Indian culture, on what parameters should the Indian academia decide to adopt it? Georgette Wang (2012) proposed a via media model between culture specific ‘emic’ approach and culture general ‘etic’ approach. According to Wang, in respect of culture general the Western communication models could be of some help. Yet, the present author has found that Thomas Kuhn’s (2012/1962) irrelevance/incommensurability (I/C) is very difficult to overcome as India offers a vast diversity where culture, language, traditions, and folk histories, local legends exert a great influence and act as local barriers to the straight one-to-one adoption of Western communication models. Edward Said (1978) exposed the false cultural assumptions that Western academia had made in establishing the ‘Oriental Studies’ schools in their universities. He strongly argued that the Western position of arrogating itself to impose ‘dominant paradigm’ in the name of Eurocentrism is misfounded and fraught with the cultural destruction of the Orient. Nair (2012) in her path breaking work-The Gaze of the West and the Framings of the East (Frontiers of Globalization) has clearly established the ability to of India to have its own communication theory citing a number of culture specific (emic) supremacies. The author has argued earlier that India is an excellent ground for research on Indianized communication and media theories citing how Everett Rogers (1999) has led his famous research on innovation diffusion through a study at two places Kheda and Jhabua--where India’s first satellite experiment, namely SITE was conducted during 1975-76 (Contractor et al, 1988). Rogers also conducted an empirical study on the effects of Education-Entertainment program of Hum Log--a teleserial telecast for Indian audiences during 1982. Based on these studies Rogers established that there is a gap in the communication research between one to one interpersonal communication and one to many communication research the divide being two subdisciplines which may also be understood as two separate paradigms in the practice of research (Contractor et al, 1982). Though Srinivas Melkote

Edward Said (1978) exposed the false cultural assumptions that Western academia had made in establishing the 'Oriental Studies' schools in their universities. He strongly argued that the Western position of arrogating itself to impose 'dominant paradigm' in the name of Eurocentrism is misfounded and fraught with the cultural destruction of the Orient. Nair (2012) in her path breaking work *The Gaze of the West and the Framings of the East* (Frontiers of Globalization) has clearly established the ability of India to have its own communication theory citing a number of culture specific (emic) supremacies. The author has argued earlier that India is an excellent ground for research on Indianized communication and media theories citing how Everett Rogers (1999) has led his famous research on innovation diffusion through a study at two places Kheda and Jhabua--where India's first satellite experiment, namely SITE was conducted during 1975-76 (Contractor et al, 1988). Rogers also conducted an empirical study on the effects of Education-Entertainment program of Hum Log--a teleserial telecast for Indian audiences during 1982. Based on these studies Rogers established that there is a gap in the communication research between one to one interpersonal communication and one to many communication research the divide being two subdisciplines which may also be understood as two separate paradigms in the practice of research (Contractor et al, 1982). Though Srinivas Melkote (Rogers student) and others have preferred Philip Kotler's marketing model to Rogers innovation diffusion, the latter sustained the curse of time.

Way back Kincaid (1987) edited a path-breaking text that examined communication from the perspectives of the classical philosophies that influenced China, Korea, Japan and India. Early work of J. S. Yadava and others in developing specific Indian communication models (especially at the village or grass root levels) have offered a lot of promise in developing a full-blown Indian communication theory. Even though Sadharanikaran is based on the Indian seer Bharatmuni's *Natyasastra*, Adhikary (2010) and others tend to call it a Nepalese theory of communication. This is because Adhikary is from Nepal and works at Khatmandu University. The author of this paper has written a series of papers arguing that Indian society and the media should be approached through their local ethos, traditions, and culture rather than through smuggled post-colonial and post-modern theories. The author of this work has clearly proved how the post-colonial scholars trained in the West have distorted the novella Devdas and tended to grossly misinterpret the roles of Devdas, Chandramukhi and Paru (2016). While he argued for de-westernizing media in keeping with the theoretical enunciations of Curran and Park (2000), authors like Daya Kishan Thussu argued for internationalizing media studies. The author opines that Thussu's suggestion of 'internationalizing media studies' is even more problematic as it does not fully address the questions of 'etic'/'emic'. There would be a number of gaping holes that need to be addressed at another level should we to accept Thussu's contentions.

Whatever may be the contentions with regard to the specific term—de-westernizing or internationalizing—the need for developing an Indian Communication Theory is very important in the light of two facts: firstly India has enormous cultural diversity and synthesis as well and this author has put out a lot of material evidence through a series of publications suggesting that there is no hindrance to develop a full-fledged Indian communication theory; secondly, the commensurability/incommensurability (C/I) or irrelevance/commensurability of Thomas Kuhn need to be critically examined before making any attempt to apply a Western model of Communication, or Journalism theory to Indian media and society. At present there is a need to address the questions raised above by the entire Indian academia without fear and favour.

05

SPACE JAMS – Mapping Challenges of Transdisciplinary GameJams in Architecture and Urban Planning on the Case of the ‘Neighbourhood Curriculum’ Game in the Making**Keywords:** Game Jams; Game Co-Design; Transdisciplinary Planning; Urbanism; PedagogyMarta Brkovic Dodig ¹, Milena Vasic ¹, Marta Nikolic ², Andri Gerber ³*(1) Union University Nikola Tesla, Serbia**(2) University of Arts in Belgrade, Serbia**(3) ZHAW School of Architecture, Design and Civil Engineering, Switzerland*

Responding to this conference call, our work responds to Sustainable Development Goal (SDG) 11 ‘Sustainable cities and communities’ and SDG 4 ‘Quality education’. Our overall aim is to design a tool in a form of a game to help us develop plans of how to use existing neighbourhood infrastructure for educational purposes more creatively and wisely, instead of responding as most architects when faced with educational space shortage and failing pupil’s academic performances, which is to build more schools. We believe in this way we could expand the meaning of educational space and improve the quality of educational experiences based on real-life.

In this work architects, urban planners, pedagogues and psychologists join forces to create a tool for producing spatial-pedagogical outputs for developing locally relevant (on a neighbourhood level) educational programs, i.e. the ‘neighbourhood curriculum’. From our perspective we define the neighbourhood curriculum as a socio-spatial-pedagogical arrangement that can successfully amalgamate neighbourhood infrastructure (streets, squares, parks, schools, farms, community centre, etc.), with existing educationally potent actors (painters, poets, craftsmen’s, etc.) and educationally potent activities (found in formal education: kindergarten, school, university curricula as well as informal and non-formal ones like festivals, sport and culture neighbourhood offer). Starting from the positionality of our own four different professions, we join forces to work in a transdisciplinary fashion, and resort to games as tool for helping us create, in a participatory manner with local stakeholders, the ‘neighbourhood curriculum’. However, such game still does not exist. Therefore, in this work we propose a structure for organising what we call ‘Space jams’ – or game jams dealing with spatial issues as “an accelerated opportunistic game creation event where a game is created in a relatively short timeframe exploring given design constraint(s) and end results are shared publicly” [Kultima, 2015, p.7].

While ‘Brain jams’, supporting game-based STEM learning through neuroscience themes (Pollock, Murray, and Yaeger, 2017), and ‘Archi Jams’ existing at the intersection of video games and architecture, are already established formats (Pavilionrus, n.d.), we propose ‘Space jams’ as a game jam format for dealing with spatial issues as more than a timely novelty. Yet, working in a transdisciplinary fashion on creating a framework for the purpose of designing our own the ‘Neighbourhood game’ revealed many associated challenges: language, game results and its physical output, game goals, characteristics of game players. These categories challenged all four professions to reach consensus, while discussions on these different and sometimes conflicting views were a fertile ground for expanding disciplinary understanding of these categories, meanings and constructs behind them.

In May 2022 game jams have celebrated their 20th anniversary. Game jams as a rapid game prototyping event have entered many fields education, spatial planning, architecture; can be used for developing both analogue and digital games; can take place in physical locations or online, and their regional affiliation span from global ones (Global Game Jam), regional ones (Nordic

Game Jam), country (Scottish Game jam) and local ones (Lai et al., 2021).

Kultima (2015) compiled a single definition of game jams after reviewing 20 different articles on the subject: “accelerated, constrained and opportunistic game creation events with public exposure”. In the same year, Locke et al. (2015) used a framework that offered an alternative viewpoint: “establishes a theoretical basis with which to analyze game jams as disruptive, performative processes that result in original creative artefacts”.

Number of authors have concentrated on the use of game jams to further STEM and STEAM education. Game jams, hackathons, and maker spaces are proposed by Fowler (2016) as informal learning settings for STEM education. In order to encourage young people to pursue a STEAM education, Pollock et al. (2017) incorporated game development and neuroscience into after-school programs. Myers et al. (2019) construct a framework for game jams based on the idea of Critical Pedagogy intended to democratize knowledge, explore, and educate the participants about a social issue. In a recent study of the usage of game jams in learning environments, Meriläinen et al. (2020) identified three emerging themes: game development skills, STE(A)M skills, and personal & interpersonal skills.

Even though it is more difficult to quantify, the authors emphasized that game jams are effective for developing social skills. The authors note that the few articles that do mention this benefit have insufficient support, indicating that it is a potential benefit that demands further investigation. (Lai et al., 2021)

The development of teamwork and collaboration skills in interdisciplinary contexts as well as supporting individual learning, where participants are given direction but ultimately decide what needs to be explored and evaluated, are important aspects of game jams. The format’s social environment tends to encourage cooperative behavior among participants and allows them to learn more about each other’s vastly different specific design and development competencies. (Hrehovcsik et al., 2016)

The field of architecture and urban planning has been very prolific when it comes to appropriating and engulfing games as their own tools. Since the creation of the field in the 60’s and 70’s by Henry Sanoff and Richard Duke, games have been used as tools for teaching, research and design; with many serving double or even tripe of these aims (Brković Dodig and Groat, 2019). While this book focuses on analogue games, de Lange and de Waal (2019) focus on digital ones and present the concept of ‘The Hackable City’ or collaborative city-making with digital media, von Borries, Walz and Boettger (2007) analyse computer games architecture and urbanism, and Gerber and Götz (2019, p.12) discuss what “the virtual spaces of games can teach us about architecture, and the role it plays in and for society” and vice-a-verse.

Today we have game jams organised to tackle the challenges in architecture and urban planning. Some of them are 2017 ‘The inclusive city game jam’ in Overvecht (Games for cities, n.d.) or above-mentioned 2021 Archi Jam (Pavilionrus, n.d.) tackling the use of video games as a tool to discuss the question of living together today.

We also have game jams deigned to facilitate co-creation of curricula to teach game design. However, what we lack is game jams, and consequently games, for tackling spatial issues or even more specifically, for creating of spatial-pedagogical programs. Therefore, so far we have organised several online and in person meetings to create a framework for organising space jams,

that should include following categories: type of game jam, regional affiliation, jam structure and duration, game jammers, game type, goals and objectives of the game, goals and objectives within the game, game rules, narrative and metaphors, players and their roles, puzzles/problems/challenges, interactions, artifacts, game structure, and debriefing.

While establishing and discussing game jam categories during our meetings this transdisciplinary group of researchers came across many challenges, with the predominant ones being mentioned below:

Language. The lack of common language in the field was obvious. What architects and urban planners presumed that learning space, curriculum, teaching means different from the ones of pedagogues and psychologists. While spatial specialists spoke about physical locations, how well they are built, the distance between them, and educational content in those, educational specialists spoke about physical space being fit to support and provide learning of different topics, educational processes that develop over time and ways that various learners learn.

Goals. While architects conceptualised game goals to address physical aspects of spaces and educational activities hosted in them, pedagogues and psychologists focused more on the processual aspects of learning in space, by asking how well identified neighbourhood spaces could be fit and support different learning styles.

Game results and (physical) output. Discussing what to produce as a result that can equally inform architectural and pedagogical practice, spatial experts were naming maps, 3d shapes mapping physical locations, distances between them, educational content, people, local events, while education specialists wondered how educational processes could be captured.

Consensus was reached that shift must be from speaking about locations and activities, to processes and ways of learning (bodily, kinaesthetic, sensory, etc..) and the challenge of capturing ever evolving learning processes noted. Hence, mapped educational locations, activities and actors on a neighbourhood level should be accompanied with through game produced 'recipe' how these 3 aspects could be amalgamated and activated, and how some sort of parameters for monitoring the quality of educational processes born out of location-activities-actors activation must be also devised.

Characteristics of game players. To what spectrum of future players' (dis)abilities game play elements and game play processes cater for? While architects came with preconception that all children and adults as potential players have same or similar age-appropriate level of skills, pedagogues and psychologists challenged architects on the notion of age as the only characteristic of players to be considered. Educational specialists questioned who as a player, with what kind of skills, can play the game. They added that community created during game play, participation of others, design and functioning of game play elements could assist players with various need and (dis)abilities to partake.

These categories challenged all four professions to reach consensus, while discussions on these different and sometimes conflicting views were a fertile ground for expanding disciplinary understanding of these categories, meanings and constructs behind them.

06

The Power of Maps: Assessing the Processes and Outcomes of Mapping Through a Participatory Lens at a Local Level**Keywords: Maps; Power dynamics; Participatory mapping; Participatory Action Research; PPGIS**Anupriya Aggarwal ¹, Poonam Prakash ¹*(1) School of Planning and Architecture, New Delhi, India*

Maps are often seen as accurate and objective representations of reality. While they offer a compelling way to demystify complexity into useful and comprehensible information, the reality is far too complex and rich in detail to get accommodated within a two-dimensional graphic scale model. Thus, maps need to generalise and distort reality in order to be useful. Similarly, maps are often considered scientific and neutral, representing an objective reality. However, they are fundamental tools employed by planners and other urban professionals with specialised knowledge and can be seen as devices to exert power in a variety of ways. This shift in positioning them as political devices brings to view their ability to influence development and alter perspectives.

Michel Foucault's power theory is taken as the key component to understanding the power dynamics in planning arising from maps, and it further shapes the methodological framework for this research. Foucault states that the exercise of power stems from control over knowledge (Gutting & Osaka, 2018; Harley, 1989; Mashhadi Moghadam & Rafieian, 2019; Richardson, 1996). In the context of planning, this means that planners with specialised knowledge exert power over those who don't have access to that knowledge, using maps as one of the fundamental tools to do so (Bayles, 2015; Evans, 1993). Alternative mapping methods, such as counter-cartography and technology-driven mapping techniques, suggest a potential to unsettle the professional power exercised through maps, yet remain widely unexplored in the Indian context.

This research explores the assumption that the maps created can be more comprehensive and mindful of diversity if stakeholder knowledge is integrated with professional knowledge. To begin with, an understanding of the exercise of power through maps in practice was developed by a critical reading of Delhi's town planning maps using an analytical framework adapted from existing literature (Duhr, 2015; Fraley, 2011; Koch, 2017; Konvitz & Thrower, 1997; Monmonier, 1991; Richardson 1996). The analysis includes both the graphic structure, where we examine the choices around what information is represented on the map and how, as well as the linguistic structure, where we understand the context for map creation— why was it created, and by whom. To get a deeper insight into the power dynamics arising from maps, interviews were conducted with ten highly experienced planners from different parts of India and abroad who have worked in both the public and the private sector as well as academic institutions. Some key takeaways were that all planners acknowledged the importance of community participation, indicating that knowledge within a community is essential, and it was understood that involving communities in mapping is more useful at a local level.

Further, through an intense engagement with twelve women from Delhi's Raghbir Nagar working in the urban informal sector, an action-research process was employed wherein a mapping methodology was co-constructed with the stakeholders. The group included twelve women, ages 16 through 60, holding various occupational roles, such as vendors—of cloth, utensils, food—and home-based workers, while two were students. Raghbir Nagar is known for its second-hand cloth

businesses run by a Gujarati community. It is home to one of the first resettlement colonies of Delhi, which came between 1965 and 1980. It also has slums and low-to-mid-income housing. The idea was to leverage the power of maps to reimagine how these underrepresented stakeholders, who mainly operate in the informal spaces in cities, interact and participate in the formal planning system.

A shared language was developed to bridge the existing communication gap between planners and stakeholders. A bottom-up participatory methodology was thus established by integrating participatory photography, personal narratives, and community mapping by adapting an existing framework called Participatory Photo Mapping, a form of Public Participation GIS (Dennis et al., 2009). First, contextual data was collected through photo walks along stakeholders' chosen routes of personal significance. These photos captured their individual experiences while functioning as visual documentation that a planner can later refer to. Second, people's narratives and descriptions of the photographs were recorded through voice recording and field notes. Third, the community-led tours were coded, and the routes were mapped on GIS. Each photograph was geolocated and hyperlinked to the map. Field notes were also linked so that they could be simultaneously examined along with the photos. Through this process, the Activity-Quality-Perception framework was generated to create more holistic maps at the community level. There are three layers of information that these maps include, namely (a) Activity, i.e. how the space is used; (b) Quality, i.e. how clean and well-maintained the space is; and (c) Perception, i.e. how someone experiences a space. These additional layers can supplement an official planning map, thus creating more comprehensive maps.

This paper demonstrates a method of engagement co-constructed with the stakeholders, offering a way to course-correct the existing hegemonic nature of mapping by negotiating diversity and converting expert-driven mapping into a more deliberative process. The counter maps produced added layers of information collated by the community, thereby taking cognisance of diverse knowledges. These additional layers can supplement an official planning map, thus creating more comprehensive maps with the possibility to inform planning decisions directly. This has many applications in the case of underrepresented and marginalised communities, effectuating transformative change in both the stakeholder and the professional.



SMUS23_02

Decolonizing Social Science Methodology

Session Organisers:

Gabriel Faimau

Professor, University of Botswana

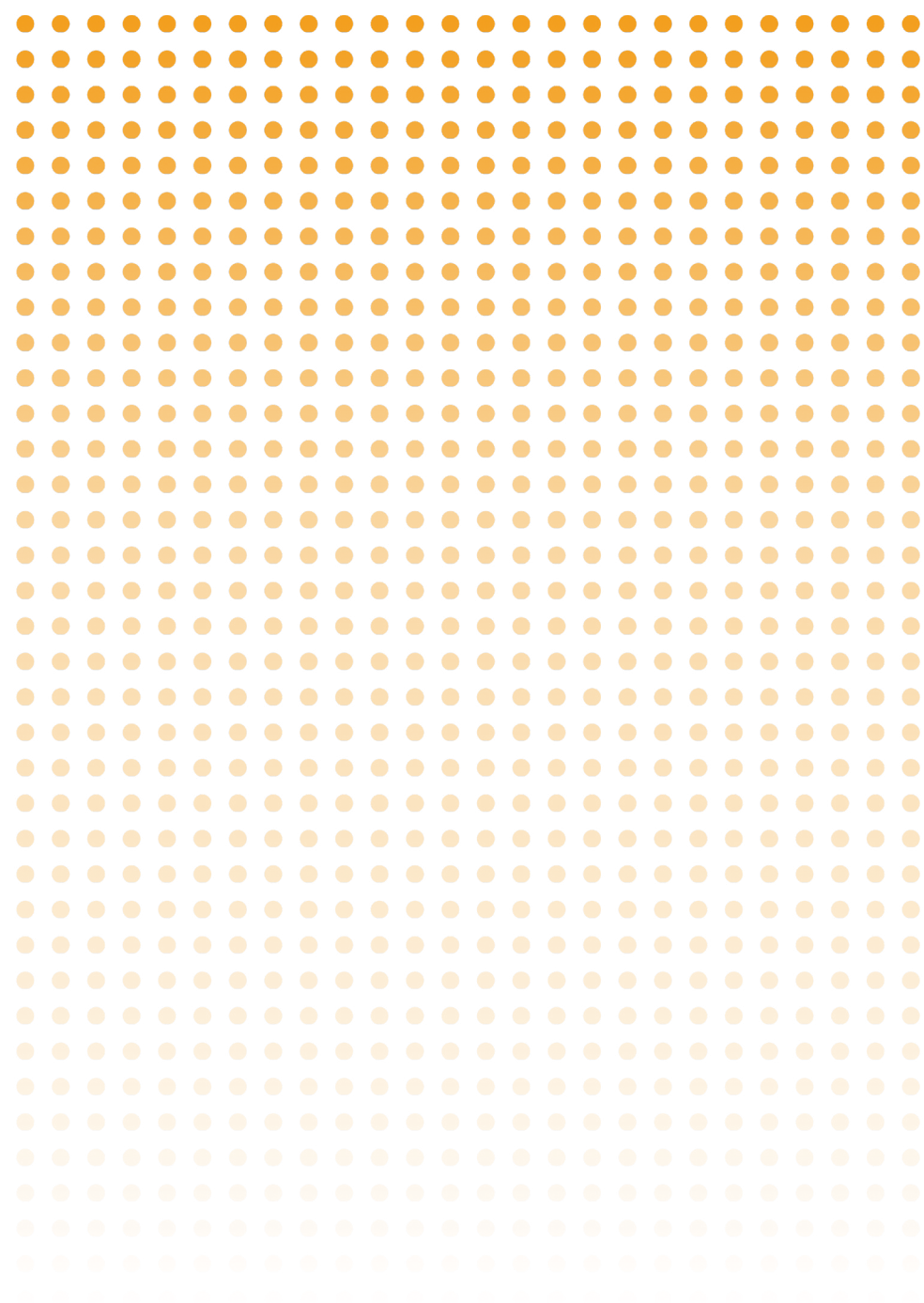
Boniface Nevanji Bwanyire

Ph.D. Student, Technische Universität Berlin

Nina Baur

Technische Universität Berlin | Director, GCSMUS





01

Decolonizing Social Science Methodology. An Introduction

Keywords: Social Science Methodology; Epistemology; Decolonization; Philosophy of Science

Nina Bau ¹, Gabriel Faimau ²

(1) *Technische Universität Berlin, Germany*

(2) *University of Botswana, Botswana*

The paper introduces the session and links the current discussion to the discussion of the last two SMUS Conferences (Botswana 2021 and Brazil 2022): While there has been a long ongoing debate on decolonizing social theory, the debate on decolonizing social science methodology has just recently started. In this context, in the course of the SMUS Conferences in Botswana in 2021 and Brazil in 2022, contributors have identified and further elaborated specific ways of thinking about decolonizing social science methodology but also raised new methodological questions, namely: (1) The ideological view of decoloniality dismantles “positivist” epistemology and philosophy of science of the Global North and reveals power relations that result in epistemicide. The challenges of this view are (a) that – if one replaces Northern “positivist” epistemologies – then what should they be replaced with? How can this be done better? If relativism is taken seriously, then what is the difference between “fake news” and “alternative facts” and scientific knowledge? Moreover, many research questions in the social sciences require being sure about (dis)similarities between contexts, e.g. in social inequality research. (b) The debate has also shown that the ideological view of decoloniality reproduces the fallacy it wants to overcome by making monolithic assumptions of “Eurocentricism”, “The West” and the “Global North”, thus ignoring that positivism has been outdated in Continental European philosophy of science for almost 200 years and that today, there is a variety of epistemic cultures not only in the Global South but also in the Global North (e.g., pragmatism, phenomenology, critical rationalism, critical theory, radical constructivism, relationism, postmodernism, anarchism, epistemological historicism, fallibilism, evolutionary epistemology, postcolonialism or empirically-grounded philosophy of science). Today, a wide range of epistemological schools exists, and many of those can be much more easily linked to Southern epistemologies than 19th century positivism. So instead of asking how to overcome Northern epistemologies, it might ask: What are the (dis)similarities between specific epistemological schools? How can they productively learn from each other, complement each other, be productively linked, refined and integrated? (2) Epistemic reconstruction shows how scholars of the Global South are (under)represented in the international system of science. In addition, power relations created by this system of science may have produced Global North scholars acting merely as “messengers” of Northern or Western epistemology. This reconstruction reveals the dilemma that the price of being assimilated to the variants of Western modernity is (self-induced) epistemicide and lack of self-confidence – the price for reconstructing categories of thoughts from one’s local and particular tradition, in contrast, makes it hard to link to global social science discourse. So if scholars from the Global South want to be linked to global sociological discourse, how can they be stronger integrated into this discourse? How to change the mindset of scholars of the Global South to be more self-confident? Is it enough to simply differentiate between the “Global North” and the “Global South”, or when and how do we need to be more refined in distinguishing scholars’ social position, e.g. by differentiating between different countries or world regions of the Global South or by scholars’ class, gender and race? (3) Decolonial reflexivity acknowledges different types of epistemologies and stresses collaboration, conversation and dialogue. From this point

of view, the important questions are how to go about this. How can scholars from the Global South become more visible and communicate on eye-level with colleagues from the Global North? What avenues can we explore in order to make dialogue or conversation and epistemological humility possible? Are there practical solutions (e.g. in the way of doing and writing up research and organizing conferences) for furthering this goal? Papers in this session should follow up on one of the questions and discuss possible challenges and solutions. Alternatively, they can raise new questions that have so far been ignored in the debate.

02

Rectification of concept for understanding data just the way they are (Theory, discipline or phenomena?)

Keywords: Rectification of Concepts; Theory-Data; Viet Nam

Ngọc Thị Bích Nguyễn ¹, Quynh Văn Trần ², Ngọc Hồng Nguyễn ³

(1) *Vietnam Institute for Development Strategies/ TU Berlin, Vietnam/Germany*

(2) *Thăng Long University, Vietnam*

(3) *Tokyo Metropolitan University, Japan*

The difficulty of applying Western theories on to Eastern Asia data, then Southeast Asia data and more particularly Viet Nam data is not a new topic (Việt Quang, 2014). However, there have been few discussions on how to solve the problem. The authors of this paper propose rectification of concept (zhengming/ 正名) coined by Kongzi (孔子) which emphasizes making concept correspond to reality and using different concepts if realities are any different. Zhengming as a methodology could:

a) prove that certain “theories and “disciplines” should be treated as phenomena to avoid forcing ideologies into data. For example, Đặng Phong (see P. Đặng, 1970) explains Vietnam socio-economy is built on its natural condition favoring crop production. His idea shares some commonality with the theory of “agriculture involution” (Geertz, 1963; King, 2008). If Weber explains capitalism has its “geist” built up on protestant ethic, Đặng Phong discovers Viet Nam “reason” to be engaged to their thousands of years of crop economy and its by-products: having little class conflict, solidarity and harmony. So, if a researcher applies sociology of religion onto Vietnam’s data and search for “religions” that form the “spirit” of that “society”, it could be a mistake. In this case, it is “safer” to consider socio-economies formed by certain religions is just a phenomenon, happening in certain “societies”. Other lands, in this example, Vietnam, even though being often heard about their long history of conflicting but harmonized ideologies of Village semi-autonomy (鄕), Zen Buddhism, flexibly adjusted (Xu, 2018) Laozi (老子) and Kongzi, their “spirit” could be built on their natural conditions sharply and their adapting yet modifying certain philosophies are only the by-products of their crop economy and village mechanism. In this case, the author question if that social theory is declared could actually solve partiality.

b) once treating theories or disciplines as phenomena only, combine certain “theories” to explain data since phenomena happen under certain conditions, could have limited duration and may be strong or weak. In this step, the researcher needs to provide the reasons why these “theories” are chosen (N. Baur, personal communication, July 2021), again, by rectifying key terms from data. For example, the researcher needs to rectify the terms “đô thị” (as translation of “urban area”), “đô thị hoá” (as translation of “urbanization”). Certain terms like “class” have been in debates if they exist in Vietnam at all (Trịnh, 2017). This step helps the researcher to see if certain theories really analyze the terms representing the data the most, or not. If there are only villages and villager habits, “capitalists” do not really exist in Viet Nam to form any municipal, but certain level of labor division still demands certain “urban rules”, the researcher could identify what theory is about this interaction.

The authors give an example of combining “theories” to explain the data of Vietnam today life as follows:

(i) East-West interaction school by Cao Xuân Huy, Dương Thiệu Tống, Thu Giang Nguyễn Duy Cần, Kim Định (see(Cao, 1995; Kim, 1974; Thu Giang, 1957) who often approach the “Vietnam phenomenon” as the consequences of East-West interaction, but with different forecasts;

(ii) Phan Ngọc’s “refraction” theory (Phan, 2000) explaining why certain institutions entering a water-rice civilization of thousands of years would always be “refracted” and turned into another version in a common “water environment”, in comparison with economics of convention theory and the entangling of the past and presence (Baur & Hering, 2017);

(iii) Anomie theory by Durkheim (as a phenomenon happening at certain degree once the villagers face certain level of industrialization’s labor division, market economy values but possibly becoming more serious under the East-West interaction as industrialization and market economy are not locally born);

(iv) Chaos theory (see Andrew, 2006) that emphasizes the power and differences of certain historical events – the village mechanism was powerful in one thousand years but now could be broken. This is in combined with the idea on the result of industrialization (D. Briesen, personal communication, 2022) and market entrance point of each country (I. C. Nam, personal communication, 2011).

c) check if a theory could at the same time be a belief (C. Man, personal communication, 2022) to forecast social changes. Before 1986, the Institute of Sociology of Vietnam, led by Đặng Cảnh Phong considered socialism what humankind could (also) achieve and heavily criticized Weber, especially his methodology for “making” capitalism sound like the only way that human society could do, while recognizing certain methods developed by Durkheim and Parsons (see C. K. Đặng, 1984a, 1984b). Going back further to Vietnam’s one thousand years of history, Zen Buddhism, flexibly adjusted Laozi (老子), Kongzi (孔子) and Co-Humanity/ Humanness/ loving and being close to common people (仁) theory founded by Trần Hưng Đạo (1231-1300), Trần Nguyên Đán (1325-1390) and Nguyễn Trãi (1380-1442) often played the double role of both theory explaining social change and morality teaching to tell common people (not just academic people) how to understand these changes, how to be independent from norms, how to change the changes. While this idea is rooted in Ru (儒) system (Kongzi, Mengzi 孟子), in Vietnam, it was modified into a theory favoring power for the common people: they were considered the decision-makers on the fate of the rulers. The ideology “academic research must serve practical needs of people and (naturally) written for common people” originated from this “loving common people” ideology. When the teaching was efficient enough, the majority acted according to the “theory” and the theory became “true”. Vietnamese scholars themselves only criticized Eastern philosophies heavily in 1900s since the concept of “Co-Humanity/ Humanness” could not save the country from being colonized, or “Butterfly Dream” (莊周夢胡蝶) and “Doing nothing” (無) could not bring them peace in mind as they used to. So, if a new theory is “enough” taught, it could create new reality and become “true”. For example, the economics of moral business by Lương Văn Can (Lương, 1926), merging capitalism with Ru system’s morality to form “trust-reputation-humanity in profit stabilization (not maximization)” in Đông Kinh Nghĩa Thục (東京義塾) movement, which promotes learning sciences and industrialization from the West and trading without profit-oriented values, but with morality and dignity values now gains attention in Viet Nam under the crisis of “losing traditional morality”. If so, the market economy toward humanity could also be re-born and sustainability may be “naturally” achieved as one of humanity’s values.

03

Decolonizing methodology of historical science of the Republic of Kazakhstan

Keywords: Decolonizing Methodology; Historical Science; Republic of Kazakhstan; the Ideological View of Decoloniality

Gulnara Mendikulova ¹

(1) Kazakh National Research Technical University (Satbayev University), Kazakhstan

A fascinating and crucial subject is the decolonization of social science methods. This is not a quasi-issue for the post-Soviet area, particularly for post-Soviet Kazakhstan. Kazakhstan was a colony of the Russian Empire and a union republic of the USSR. Without a question, the colonial era had an impact on how people thought. This has an impact on or has an impact on research methods.

The powerful historical school of the Soviet Union was succeeded by the historical science of the Republic of Kazakhstan. We all know that ideology and Communist party dominance had a negative impact because everything was seen through the lens of CPSU decisions.

First and foremost, the post-colonial reliance that affects or does not effect (individual scholars') ability to undertake research must be changed. Without a solid theoretical and methodological foundation, it is impossible to conduct any type of scholarly study. For instance, the Republic of Kazakhstan's higher education system places a great priority on Kazakhstani history. World history is studied in Kazakhstan's schools and historical departments of all colleges and universities. The history of Kazakhstan is seen as an important and essential component of global history. Research is also done on current historical questions and challenges in Kazakhstan and around the world. As a result, recent academic advancements are used in the teaching process.

It seems to be relevant to the idea of historical memory as well, in my opinion. The term "historical memory," which is also used to refer to "collective memory," "social memory," or, for political scientists, "the politics of memory," describes how societies, communities, and nations create and connect with specific narratives about historical eras or events.

Social and political identities are built on historical memories, which are frequently changed in light of the current historical-political context. The history of this idea and its applications in modern historical science are covered in this entry. This is especially true of recent shifts away from authoritarian control and the emergence of politically more democratic cultures.

We might try to debate and address these issues during the conference session: How can decolonizing methodology help historians in Kazakhstan engage with and become more visible in the global research community? What concrete steps can we take to develop our research connections and independent points of view in addition?

04

Training Curricula's Contextualization in Social Sciences Research as a Way Of Conquering Self-Confidence of scholars from the Global South

Keywords: Self Confidence; Cognitive Justice; Academic Socialization; Cameroon; Global South

Estelle M.KOUOKAM ¹

(1)Catholic University of Central Africa, Cameroon

One of the traditions in research methodology in sociology and anthropology disciplines in Cameroon universities is to familiarize young trainees with authors identified as the “classics” of the disciplines. During the first cycle and the second cycle of the university, respectively in the Bachelor and Master's level, there is a major gap in the curriculum as it does not embrace the global history, kinship, and specificity of the locality culminating to the social sciences being mostly western and male oriented,

In the Global south, specifically, a country like Cameroon the dynamics are very complex because of its double colonial legacy (English and French). The primary socialization of the two disciplines is located within the legitimacy of discourse and knowledge emanating from an external space, external authorized authors, and an external authorized language. This academic socialization is also evident in gender studies and development studies.

An attempt to talk about the decolonization of knowledge arose during the third cycle of training whose objective was to show “other perspectives”. The alternative viewpoints were not taken seriously yet those approaches would have acted as a benchmark in comprehending the social dynamics in Cameroon. The same system of privilege is still reinforced in the university whereby only a few privileged trainees get to the doctoral level. What is disconcerting is that the young researchers still write and use words in a mechanical way utilizing verbatim, some other kind of authorized discourse on methodology of each of these disciplines. Inhibiting creativity and innovation thought processes.

05

Decolonizing Curriculum and Pedagogy in Higher Education in Nigeria: How Relevant is Co-Production of Knowledge?

Keywords: Curriculum; Pedagogy; Nigeria; Higher Education; Epistemology

*Idongesit Eshiet*¹

(1) University of Lagos, Lagos

Decolonization has become the latest buzzword in development discuss in recent times. Echoes of decolonization can be heard in both the global North and South. There are calls to decolonize practically everything – education, politics, health, economics, religion, culture, museum, arts, fashion, food, publishing, internet, media, etc. Calls for decolonization are rooted in colonialism which was a historical epoch of conquest and domination of other lands and peoples by Europeans in the quest to expand mercantile capitalism. Colonialism led to the imposition of European systems and cultures on indigenous people. Although colonization as a direct physical domination of peoples and their territories is now history, its legacies and vestiges are still entrenched and visible in all societal structures of former colonies, ranging from micro-level cultural traits, symbols, patterns, and communication in everyday life to macro-level educational, economic, political, health and religious systems. Thus, colonialism was not just a physical domination but also a cultural and psychological domination. The increasing awareness of the need to decolonize these structures in recent times, is what has propelled the calls to decolonize the various facets of post-colonial states. However, the calls echo loudest within education. Education, especially higher education has rightfully gained much attention in the decolonization discourse because of its role in knowledge generation, production and application, hence perpetuating colonial legacies. One of the areas in higher education that is in urgent need of decolonization is the curriculum and pedagogy. This is because the Global South needs epistemologies and pedagogies that are relevant to solving practical local problems. This study aims to investigate the relevance of co-production of knowledge in decolonizing the curriculum and pedagogy of higher education in Nigeria. Nigeria is a post-colonial state that is still grappling with a myriad of developmental issues. Nigeria ranks among the countries with the highest level of poverty, globally. Nigeria still grapples with issues of governance, infrastructural deficit, corruption, nepotism, terrorism, maternal and infant health, gender inequality, human rights abuses, etc. Dependent on western epistemologies over the years has not proffered adequate solutions to these problems. This calls for alternative ways of knowledge generation and production. How relevant is co-production of knowledge based on indigenous knowledge systems to evolving new epistemologies and pedagogies that can solve Nigeria's local problems? What methodologies should be used for such co-production? These are the issues this study seeks to interrogate with a focus on the Nigerian health sector. The health sector is made the focus due to the very deplorable state of the sector. Nigeria ranks as the second largest contributor to maternal deaths and third contributor to infant mortality globally, while the life expectancy stands at an all-time low.

06

Students' Contribution to the Decolonisation of the Psychology Curriculum: Participatory Video Approach in Times of COVID-19

Keywords: Students; Decolonisation; Psychology; Curriculum; Participatory Video Approach

Malefane Kenneth Maine ¹, Claire Wagner ¹

(1) University of Pretoria

This paper presents a case study on co-producing knowledge for the decolonisation of the psychology curriculum. The decolonial movement in psychology emerged from the appreciation of its colonial history that remains embedded within its curriculum. This renders psychology irrelevant to many communities within the Global South and thus the calls for decolonising the discipline have become vociferous. A decolonised psychology curriculum would be responsive to the needs of the communities wherein the university operates and enables students to contribute to social change. Currently, the privilege of contributing to the curriculum development has been the preserve of the academic and administrative staff at the university and, in exceptional cases, space for prospective employers has been created. Students have been largely excluded from the psychology curriculum development. In other words, they have been perceived as not having much to contribute to the discussion about what is taught in the classroom. From this perspective, students are empty vessels coming to the university to be filled with information. This approach is characteristic of the banking model of education that has characterised much of higher education. The current configuration reflects the power imbalances within the curriculum development space where students are not visible, nor are they in a position for eye-level communication about the development of the psychology curriculum in higher education.

The current study, which was part of a doctoral project, aimed to begin to disrupt the status quo by creating space for students, as one of the neglected stakeholders, to contribute to the conversation of decolonising the psychology curriculum. Students were viewed as the preferred stakeholder firstly because of their continued exclusion in conversations on curriculum development. Secondly, students are not one-dimensional; they are complex beings that have embodied knowledge and can therefore make unique contributions to the development of psychology. Thirdly, students are considered the future of the profession and will eventually service communities where the curriculum does not necessarily equip them adequately to serve. Fourth, the context of higher education can be experienced as violent and isolating; thus, this contributes to the difficulties that students face in universities which can result in some not completing their studies. Therefore, it was essential to explore students' perspectives to understand their experiences at universities and gain insight into their perspectives on the meaning of decolonisation within psychology and how to bring it about

The study followed a participatory action research approach (PAR) and used a participatory video approach (PVA). The PVA is a method of collecting data where the participant are given video recording equipment to record and collectively edit an aspect of their experiences that is relevant to the study. The process of recording and collectively editing the data is firstly preceded by extensive critical reflection relating to the participants' experiences relevant to the study. The experiences of interest in this study were the experiences of post-graduate psychology students at a South African university regarding the current state of psychology and the psychology curriculum. Secondly, the process entailed their reflection on the colonial history of psychology and thirdly, to explore ways to bring about decolonisation and make these student perspectives visible to the university. In this way, this study sought to create circumstances where students can contribute to the decolonisation and curriculum development debate within psychology at this particular institution.

The PVA is made up of specific steps that culminate in the compilation of a video created by the participants which required post-graduate students to work together in close proximity. The execution of the project coincided with the outbreak of COVID 19 and the measures implemented to mitigate the spread of the virus made it impossible to execute the project in line with the steps outlined in the literature on PVA

The paper outlines the process of the PVA that produced interesting insights concerning decolonisation within the psychology curriculum. Attempts to ensure the validity and legitimacy of the process that was affected by COVID-19 regulations will be discussed as well as lessons learnt from the case study about co-production of knowledge relevant to decolonisation.



SMUS23_03

Fieldwork in the Global South – Shedding Light into the Black Box

Session Organisers:

Wolfgang Aschauer

Associate Professor, University of Salzburg

Martin Weichbold

University of Salzburg

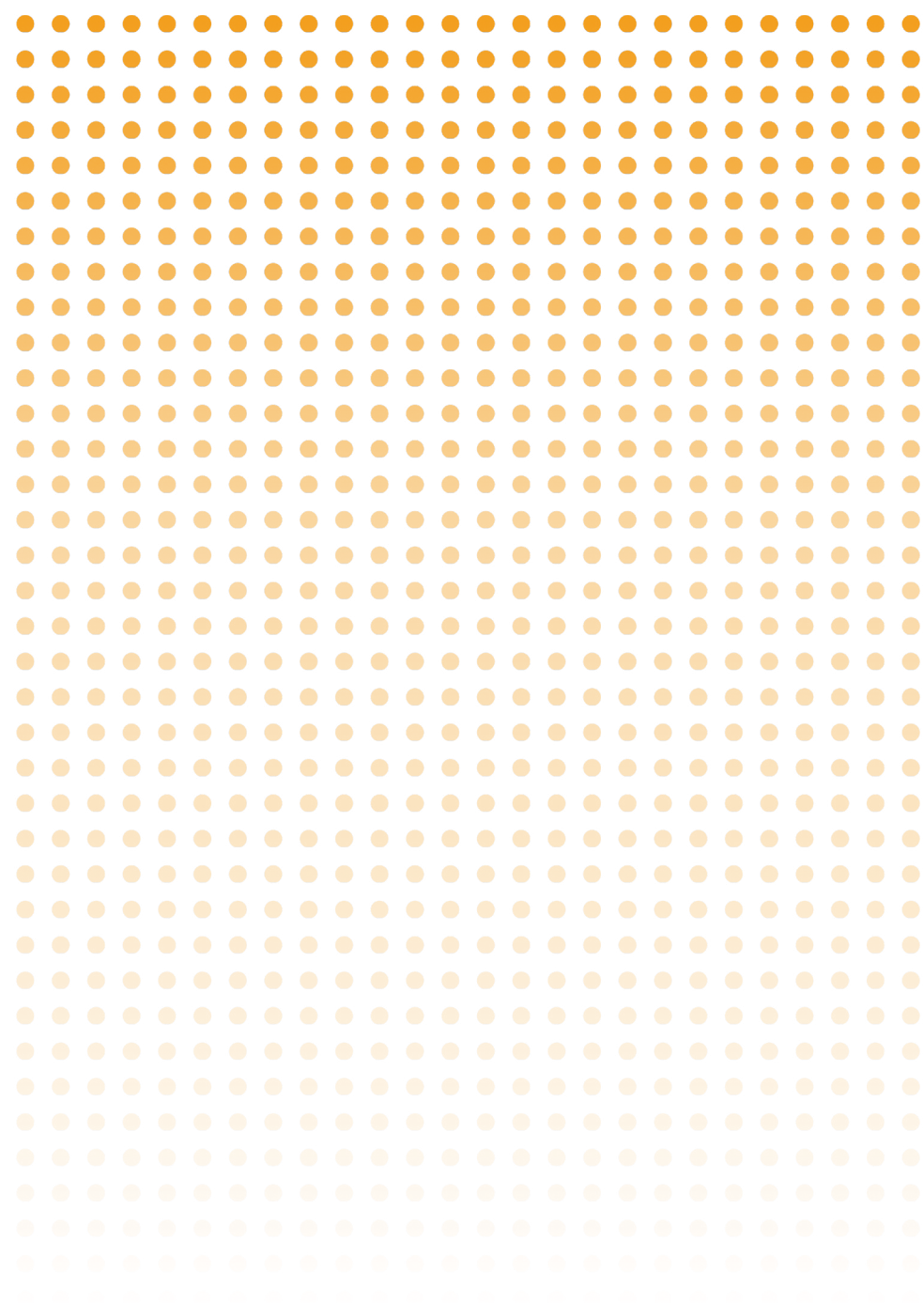
Dimitri Prandner

University of Salzburg

Alexander Seymer

University of Salzburg





01

Sampling and Categorization of Households for Research in Urban India

Keywords: Sampling; Sampling Frame; Urban, Inclusion; Governance

Katie Pyle ¹

(1) Janaagraha Centre for Citizenship and Democracy, Bangalore, India

Conventional sampling methodologies for citizens/households in urban research in India are constrained due to the lack of readily available, reliable sampling frames. Voter lists, for example, are riddled with errors and as such may not be able to provide a robust sampling frame from which a representative sample can be drawn. The Jana-Brown citizenship Index project consortium (Janaagraha, India and Brown University, USA) has conceptualized a unique research design that provides an alternative way on how to identify, categorize, and sample households (and citizens within) in a city in a representative and meaningful way. The methodology was designed to enable systematic data collection from citizens and households on aspects of citizenship, infrastructure, and service delivery across different demographic sections of society. The paper describes how 1) Data on communities that are in the minority such as Muslims, Dalits and Adivasis can be used to categorize polling parts to allow for stratified random sampling using these strata, 2) Geospatial tools such as QGIS and Google Earth were used to create base maps aligning to the established polling part unit, 3) The resulting maps were used to create listings of buildings, 4) How housing type categorizations were created (based on the structure/construction material/amenities, etc.) and comprised part of the building listing process, and 5) How the listings were used for sampling and to create population weights where necessary. This paper will describe these methodological approaches in the context of the project while highlighting advantages and challenges in application to urban research in India more generally

02

Socio-Economic Status of Slum Dweller of Patna: Investigation and Strategies for Sustainable Development Aftermath of Covid 19**Keywords: Slum; Sustainable Development; Covid 19; Socio-Economic Status**Ashish Ranjan Sinha ¹*(1) National Institute of Technology, Patna, India*

In spite several initiatives taken by central and state government to generate employment opportunities and infrastructure development in rural area through MANREGA, PMRY, PMGSY etc. there is mass exodus of people from rural area to urban area in search of employment opportunities for better quality of life for their family in Bihar. In Bihar, nearly ninety per cent people live in rural area and rate of urbanization is only 10 per cent. There are few cities in Bihar like Patna, Muzaffarpur, Gaya and Bhagalpur which are socially and economically advanced and they have the capacity to absorb the migrant from rural area. Poor, unemployed and uneducated laborer from rural area generally migrates to urban area and due to paucity of land they settle in slum area. What is slum in the city landscape is of spontaneous origin. This very spontaneity makes the definition of slum difficult. There is no general definition of slum because of difference in formation of slum. Broadly speaking, a slum is an over- crowded poverty stricken area having dilapidated building (huts), lack of open spaces, no arrangement for suitable drainage and safe drinking water, very miserable health conditions of dwellers, crooked and narrow lanes and very high density of population. Due to unemployment and extreme poverty in rural area, there is mass migration of rural people for search of employment and this compels them to live in a very miserable place in urban location and leads to formation of slum.

The main objectives of this study were to conduct Socio- economic study of slum dwellers of Patna for collecting various primary parameters of socio- economic condition including quality of life aftermath of Covid'19 pandemic shocks, presenting the grass root reality of socio-economic condition of slum dwellers by collecting and presenting primary data to take up more realistic measures for up-gradation and sustainable development of slum area specially after Covid'19 pandemic and Investigate whether in situ development or relocation of slums in some different area (like outskirts of city) would be better solution for socio-economic development of slum dwellers of Patna city, whether government enabling process or private investment or public private partnership would give better solution to redevelopment of slums of Patna city, Land title be provided to individual slum dweller or to on community basis or any other method for up-gradation of slums and how socio-economic condition of slum dwellers of Patna would be better off for sustainable development especially after waves of pandemic shocks.

In this paper socio economic status of slum dweller after Covid' 19 have been investigated and strategies and policy have been formulated for sustainable development of Slum area of Patna. Primary data has been collected from 108 notified slum area of Patna district. Nearly 100 households have been taken from 20 slums as sample to study the socio-economic conditions (Nature of Employment and sources of Income specially during Covid 19' Pandemic shocks, pattern of expenditure ,savings and bank linkage, asset of Slum Dwellers ,social condition before and during Covid19 shocks, health status and medical facilities during pandemic shocks, educational Status ,type of land ownership, housing condition, sewerage, electricity, garbage disposal, drinking water facilities, etc. The age of the slums in Patna city varies from few years to more than 100 years.

From these 20 sample slums, 10 slums have been taken whose ages were more than 25 years and 10 slums have been taken whose ages were less than 25 years. In our case stratified simple random sample method has been adopted. A well- structured questionnaire has been prepared to measure socio economic condition of slum dweller after Covid'19 pandemic shocks. It was found that Recently Pandemic shocks have shattered the socio-economic conditions and made it more miserable especially for poor people ie slum dwellers of Patna city.

03

Precarious Waters; Spatializing Agency among Dispossessed Fisher Women of Lake Chilika**Keywords: Rights; Photogrammetry; GIS; Ethnography; Interviews**Amy Brar ¹*(1) Architecture Association, London, United Kingdom*

At a moment when uncontrolled construction and the climate emergency are ironically racing against one another, alternatives to existing architectural practices and methods are becoming rapidly more relevant. To deviate from such socio-ecologically destructive practices warrants a methodological investigation into cultures and geographies often overlooked due to a social or geographical isolation. The global south is a hotbed for such alternative forms of knowledge, specifically in the built environment. However, there remains a lacuna in the comprehensive spatial documentation of living patterns and conflicts within such marginalized communities, which can offer uncharted avenues for architecture and planning.

The specific goals of undertaking fieldwork as an architectural method are trifold. Firstly, to re-define and decolonize an understanding of typology using ethnographic fieldwork. Secondly, to document known rituals, practices and beliefs through a spatial lens. Thirdly, to analyse existing embedded spatial knowledge, so as to a) preserve crafting and material techniques passed down verbally b) build upon traditional typologies c) reconfigure an understanding of the ‘other’s’ values through spatial extrapolation. Utilizing tools inherent to the architectural profession (3d modelling, CAD, sketching, etc), the paper proposes the use of advanced 3-dimensional mapping systems from basic phone applications such as POLYCAM to complex modelling systems using photogrammetry such as MESHROOM, which allow for complete reconstruction of the physical environment instead of simply a spatial one.

The paper, titled Precarious Waters, specifically investigates fishing communities of Lake Chilika that fall under the Krushnaprasad Block, Puri, Orissa. Shrimp aquaculture has been cause for conflict in Chilika Lake between traditional fishing communities and non-fisher groups, specifically since 1991 when the State Government of Odisha joint hands with the industrial powerhouse TATA to bring shrimp aquaculture practices to Chilika. In 1996, the conflict reached the highest judicial level in India, when the Supreme Court ruled against any aquaculture activities within 1000 meters of Chilika Lake, which included aquaculture industry, shrimp culture industry, and shrimp culture ponds. Still, shrimp aquaculture (specifically for export) has persisted in violation of the law, resulting in a constellation of illegal practices, generating divided socio-spatial conditions. Such modes of spatial production are representative of class power in neo-liberal India, and continue to bolster existent inequalities, specifically in geographically isolated regions such as Krushnaprasad.

Concentrating on spaces of water and their associated protocols, specifically through the lens of the subaltern female subject, Precarious Waters argues for a shift in our understanding of value and productivity by learning through embodied knowledge, rituals and practices of the traditional fisherwomen, attempting to subvert the homogeneous, universal and regular reading of space that reinforces inequity across space and time. During the fieldwork, fisherwomen are interviewed, their rituals and habits are documented, and they are integrated in the process of documentation as well. Instead of associating traditional fisherwomen’s conditions with a ‘lack’ of infrastructure,

this method proposes that there are existent forms of infrastructure within these communities that reveal types, typologies and forms of living different from dominant discourse, which can stitch the divisive spatiality proliferating around Chilika Lake. Through a methodology that challenges traditional forms of architectural and geographical representation, this paper aims to discover and offer alternatives to existing modes of spatial production, specific to forms of water infrastructures.

Learning from the fluidity between fisherwomen and the bodies of water they inhabit, Precarious Waters proposes a series of interventions from the intra-village, village to inter-village scale, which build networks and enhance agency for marginalized groups that have become increasingly disenfranchised by hegemonic spatial rights and practices . Looking specifically at the territorial tria-lectics between non-fisher groups, industrial-scale shrimp aqua-culturists and traditional fisherwomen, the paper unravels issues of land rights, ownership, value, sexuality, and precarity through spatial representation techniques. Highlighting value in the space of the ‘other’, spatial practice then confronts socio-ecological hierarchies, promoting equity through a heterogeneous *modus operandi*.

04

Coxswaining Fieldwork Through the Socio-Cultural-Political Mazes in Local Communities: Account of Fieldwork Challenges Faced by Two Qualitative Policy Researchers in India**Keywords: Rights; Photogrammetry; GIS; Ethnography; Interviews**Sneha Swami ¹, Sameer Pendharker ¹*(1) Centre for Policy studies, IIT Bombay, India*

The qualitative research approach is seen as helpful in public policy research in view of the comprehensive, contextually-grounded, and nuanced understanding it provides of policy processes and issues. However, such understanding is contingent upon the collection of highly-granular, rich, and diverse data from participants about their experiences and interpretations. This generally poses diverse, stiff, and highly context-specific challenges for qualitative researchers, though developing country contexts offer some special challenges in this regard. The literature identifies and discusses some broad challenges such as participants' lack of patience for lengthy interviews, participants' reluctance to share sensitive information, security issues for the researcher, lack of trust in the researcher, or language barriers. However, there are very few instances of a detailed investigation into this issue, providing context-specific nuances and insights.

Against this background, this paper presents an exhaustive, context-specific, and highly nuanced account of challenges encountered during the fieldwork for qualitative research in India on the theme of 'issues in the last-mile of policy delivery'. The fieldwork was conducted in two different Indian states for research in the electricity and urban water sectors. Fieldwork locations consisted of different service-providing government offices, consumer locations especially slums, and various service delivery interaction points of provider and citizen. This paper discusses and analyzes the challenges and barriers faced by young policy researchers in conducting fieldwork for qualitative research in India. It draws from the thematic analysis of detailed documentation of experiences and observations made during the fieldwork by two researchers, one male, and one female, both natives of India. As the theme of the session is, 'Fieldwork in the Global South – Shedding Light into the Black Box', we believe our research has relevant contributions that shed light on the black box in terms of understanding fieldwork challenges in India.

The two authors, both native of India, built detailed documentation of their experiences and observations during their fieldwork for the combined duration of ten months. This documentation, developed with prior and systematic planning and preparation, is mainly in the form of different kinds of 'memos' including reflexive memos. This textual data was strengthened further by drawing relevant observations and insights from the transcriptions of qualitative interviews of various categories of respondents. This data was then analyzed using the thematic analysis technique to identify and articulate in detail the challenges faced during the qualitative data collection.

The paper establishes that the fieldwork challenges faced by young policy researchers in India are rooted in factors like highly divisive politics, acute disparities, and weak institutional environment through discussion of different instances of manifestation of these factors. The intense contestation and conflicts among different social groups in local communities made researchers' jobs difficult, especially in urban slums. Researchers found it difficult to dispel the suspicion of both groups that emanated from their intense rivalry. In such situations, there is a danger that researchers' access to key respondents is restricted. Working with acutely disadvantaged communities raised different kinds of challenges. Often, respondents from acutely disadvantaged communities expected researchers'

help in solving problems. Sometimes respondents even assumed that researcher has gone to the field to solve their problems or fight for their rights or issues. Sometimes, respondents assumed that study is conducted for some government policy and framed their responses accordingly, often reflecting their aspirations and expectations.

The findings presented in the paper include the observation that researchers' identities pertaining to class, caste, religion, language, marital status (especially of the female researcher), and location—were the main sources of field-level challenges. For example, respondents asked researchers for their surnames and the female researcher about her marital status without any hesitation. Even the nuanced differences in caste and language led to significant differences in the responses of participants. While working with communities with predominantly lower caste populations, the researchers' upper caste background proved to be a major barrier. There was a sense of distrust among the participants which came out in the form of very brief or no responses. For example one of the researchers was asked, "you are from an upper caste, how come you want to know all these things about us?" This hurdle was overcome with the help of primary field contacts who helped in conveying the aims and goals of the research through dialogue with such participants.

Entry into difficult localities (especially slum areas) was gained through primary field contacts consisting of local NGOs, activist groups, or civil society organizations. The rivalries among these different groups also acted as a major barrier to getting access to slum areas. For instance, when one of the groups got to know that the researcher was involved with another rival group, they started avoiding the researcher. Expectations of these groups also hamper and pose a challenge for fieldwork. Many times these groups try to impose their ideologies and political positions on the research which may result in deviation from the original objectives and motivations of the research.

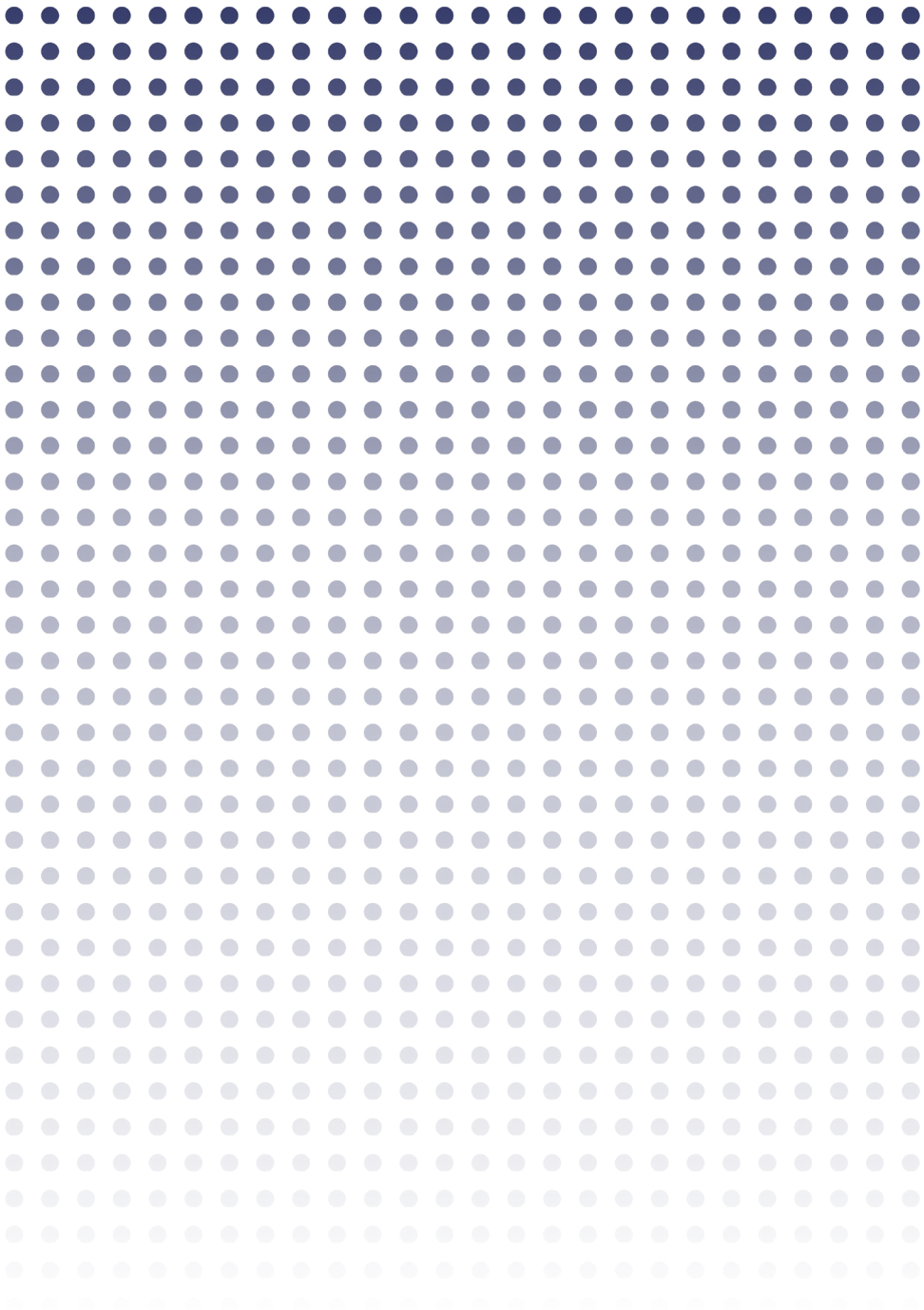
While working with communities with high levels of gender sensitivities, researchers of both genders faced different kinds of problems. For example, the female researcher studying frontline workers in the electricity distribution sector, which is heavily male-dominated, struggled to gain their trust. While the male researcher studying water distribution in city slums found it challenging to get the perspective of the females in the slums. Socio-cultural constraints on respondents as well as socio-cultural expectations from researchers, especially female, created stiff barriers to open and candid sharing of information. For example, choice of the outfit also mattered while conducting fieldwork, as it affected the perception of respondents about the researcher. Researchers found it difficult to dispel suspicion among participants about their intentions, which were rooted in local politics.

While suspicions and distrust offered one set of challenges to data collection, candid responses offered another set of challenges. Sometimes participants became emotional or even started crying while talking about their difficulties to receive the services. Such a situation put researchers in a sensitive spot. Handling such a situation was not only challenging but analyzing such data was also painful and prone to researcher bias.

Many government functionaries tried to overwhelm the young researchers by assuming an overly paternalizing stance and aura of omniscience and omnipotence. Officials in service-providing companies always tried to portray the best performance of the organization and also hid or did not accept the performance failures in the system. It was difficult to transcend the tales of bravado while interviewing senior politicians and elected representatives surrounded by acolytes. The wide

prevalence of fraudulent formal data and equally widespread tendency to hide information made it difficult to carry out triangulation.

Challenges in data collection directly impact the thick description of qualitative research which is one of the key epistemological imperatives of qualitative research. Therefore, It is critically important to discuss, understand, and overcome these field-level barriers to fulfilling the epistemological imperatives and ensuring the quality of qualitative policy research. The central argument of this paper is that the socio-cultural-political issues faced during fieldwork in India create challenges that need to be resolved to generate reliable, contextually-rich qualitative data.





SMUS23_04

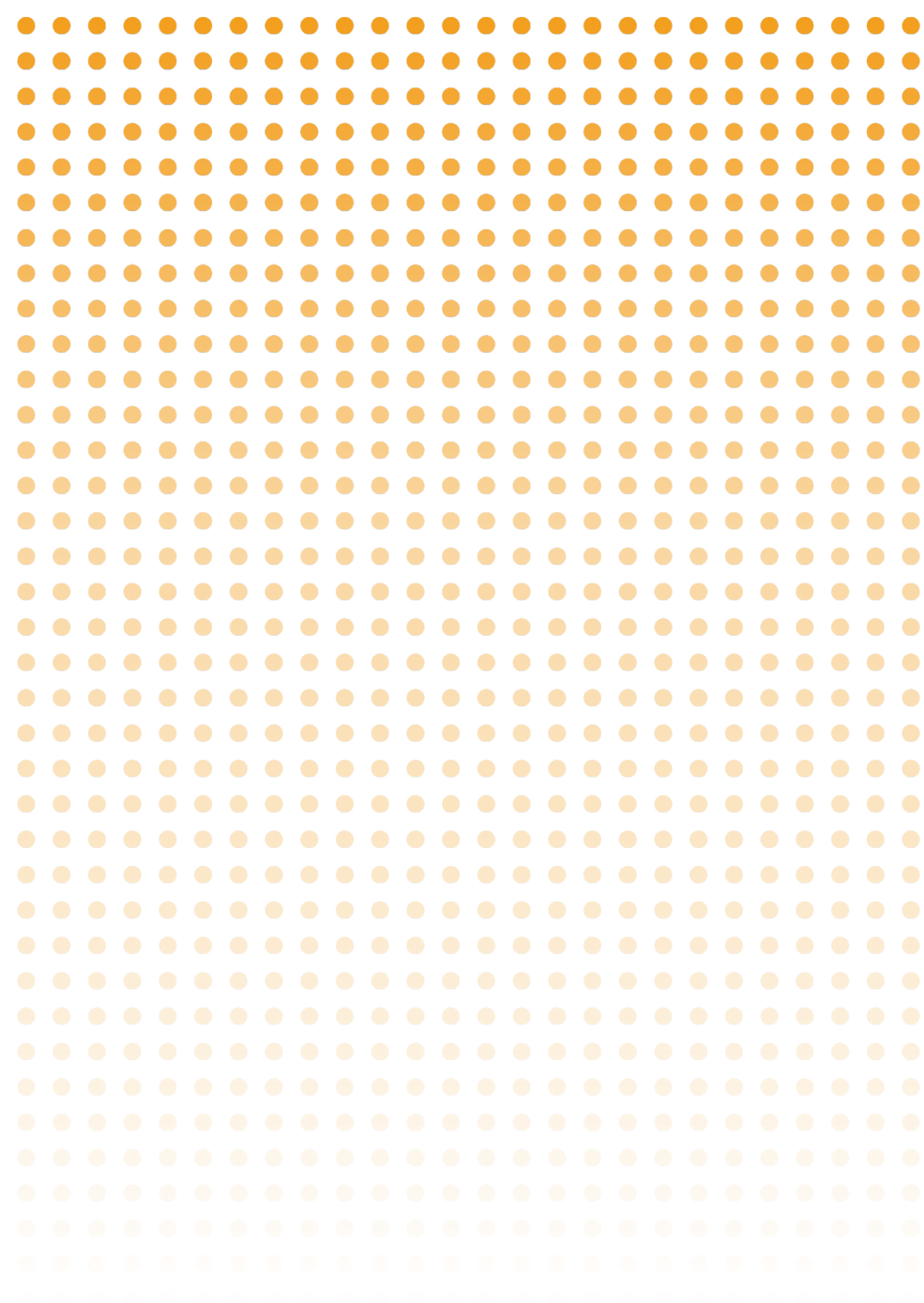
Assessing the Quality of Survey Data

Session Organiser:

Jörg Blasius

Professor, University of Bonn





01

Identifying Outliers to Improve Survey Statistics

Keywords: Data Quality; Satisficing; Principal Component Analysis

Jörg Blasius ¹, Susanne Vogl ²

(1) University of Bonn, Germany

(2) University of Stuttgart, Germany

Already a few outliers can affect the entire solution in a large data set. This is especially true when analyzing sets of variables within a multivariate approach, for example, item batteries measuring latent attitudes. In both principal component and factor analyses, rotation of results is a standard feature of multivariate data analysis. In many cases, the un-rotated solutions remain un-published. Most often applied is the Varimax rotation, which usually allows a better interpretation of the content, since it better adapts the variable clusters. In the presentation we show that such a rotation often only optimally adapts the outliers of a survey, i.e., respondents who are often characterized by a (strong) satisficing behavior. As an empirical example we use data from a Viennese study with 14 to 16-year-old pupils from non-advanced schools; the data have been collected in 2018 within a web survey. With low educational attainment and more than half of the respondents having German as their second language only, we can show that some pupils gave arbitrary answers that affect the entire solution.

02

Panel Attrition in a Dwelling Panel

Keywords: Panel survey; Attrition, Data Quality; Gentrification; Spatial Methods

Alice Barth ¹, Manuela Schmidt ¹

(1) Institute of Sociology, University of Bonn, Germany

Started in 2010, the Cologne dwelling panel is a panel designed to measure change in neighbourhoods (Friedrichs & Blasius 2015; 2020). The fifth wave of data collection took place in summer 2022. Unlike a “classic” panel of persons or households, here the dwellings constitute the units of investigation. One inhabitant of a dwelling acts as its “speaker” – he or she gives information on the dwellings’ characteristics, like its size, furnishing, amount of rent, but also on his or her attitudes towards the neighbourhood, life circumstances and composition of the household.

When a household moves out between waves, a new inhabitant of the same dwelling is interviewed in the following wave. This means that purely for reasons of design, new persons enter the panel in each wave and others leave it. After each move, a new “speaker” needs to be convinced to participate in the panel. While the dwellings as units of investigation stay the same, their facilities may change with a change of inhabitants.

Like other panels, a dwelling panel suffers from attrition. The dwellings themselves cannot discontinue their participation, but their inhabitants can and will do this for various reasons (e.g. lack of motivation, life events like illness, child birth, job change, and others). Panel attrition is detrimental for data quality, as the sample becomes smaller and less representative of the general population (in this case, the neighbourhood). Studies of person or household panels have shown that attrition is not random. While most determinants of not participating in the next wave are highly variable depending on study design, fieldwork, and societal context, a move of the panel household often significantly improves the probability to attrite (Behr, Bellgardt & Rendtel 2005; Frankel & Hillygus 2014). In a dwelling panel, however, moves of individuals are invariably part of the design and need not be problematic in terms of sample composition when in-movers’ willingness to participate in the study is high.

In this presentation, we aim at assessing attrition in the context of a dwelling panel. How can individual and dwelling-specific characteristics be disentangled in order to study determinants of attrition? In a logistic regression model, we use dwelling characteristics such as size and location as well as inhabitants’ status (moved or not) to predict the probability of attrition. We discuss the impact of attrition on sample composition and representativeness and discuss methods of drawing refreshment samples in a dwelling panel.

03

Surveying (in) Pandemic Urban Waterscapes: Challenges and Lessons from a Quantitative Household Survey in Nairobi, Kenya

Keywords: Household Survey; Water, Covid-19; Nairobi; Intra-urban Comparison

Moritz Kasper ¹

(1) Technical University Dortmund, Germany

In early 2022 – roughly two years after Kenya’s first confirmed case of SARS-CoV-2 – a team of Kenyan and German researchers as well as (student) assistants from the University of Nairobi conducted a large-scale household survey in two neighborhoods of Nairobi that asked about changes in place-specific water supply situations and water use since the onset of the pandemic. The survey was part of a 12-months-long, collaborative research project by the Technical University Dortmund and the University of Nairobi, titled ‘Urban Waterscapes and the Pandemic’. Ultimately, the project aimed to a) explore and assess the impact of the Covid-19 pandemic on Nairobi’s overall and place-specific waterscapes, and b) ultimately conceptualize waterscape changes in pandemic times between creativity and contestation.

The pandemic as an infrastructural event – with its socio-economic and socio-technical impacts in Nairobi’s overall waterscape – allowed for an intra-urban comparison between different infrastructural configurations of water supply and use; in particular in regard to short-term and long-term impacts of the pandemic. Using a mixed-method study design of qualitative interviews and a largely quantitative survey with more than 900 respondents in total, the target areas for data collection were two water-deprived yet structurally different neighborhoods in Kenya’s capital city. One, the informal settlement of Kibera with its shack architectures, very rudimentary connections to Nairobi’s water grid, and high prevalence of private water vendors. Two, the central and burgeoning Eastleigh neighborhood – hub of the Somali community and diaspora – with its multi-story apartment buildings, alleged grid-connectivity, and increasing number of individual boreholes. Both areas had been highly affected by the economic and social effects of the pandemic and the respective response measures by the Kenyan government.

In the aftermath of the height of the pandemic, and considering the structural differences of both neighborhoods, conducting a household survey in two water-deprived urban areas came with particular challenges and lessons learned. For one, the survey design and questions had to work for two different urban situations, and it had to probe potentially sensitive topics, such as individually experienced distress and harm during the pandemic. Further, the planning and implementation of the on-the-ground survey had to reconcile methodological rigor with the constraints of a (post-) pandemic situation, including where and how to recruit survey respondents. In addition, the safety of the survey team was of utmost importance, while they faced varying challenges in both areas in terms of the (random) selection of participants and purposefully selecting respondents (e.g. in terms of gender and, especially, ethnicity). For this, very close contact and constant communication as well as daily data monitoring and feedback rounds were implemented to ensure a collaborative, safe, and methodological sound survey process that would result in high-quality survey data.

Ultimately, I will highlight and discuss how the constraints and considerations above may or may not have affected our survey data, how we have assessed the data (on a daily level and post-survey), and which limitations yet exist regarding the analysis of the data. By doing so, I hope to contribute

to a) general discussions on the generation and use of (household) survey data in urban studies and infrastructure research, and b) the specificities of survey implementation and data assessment during or after (health) crises, such as the recent pandemic. With reference to some of our empirical findings, I will finally point out how the methodological constraints and opportunities of a (post-) pandemic survey enabled us to uncover non-traditional urban geographies of water inequalities and fragmentation in Nairobi.

04

Possibilities and Potentialities of Coalescing Processed Produced Survey data and Elicited data in Sociology of Deviance

Keywords: Processed Produced Data; Survey data; Research Elicited Data; Deviance

Khumo Motshwari ¹

(1) Universitat Augsburg, Germany

Processed produced data has always been criticized for its limitations and inability to address certain kinds of research questions, and this is buttressed by arguments in Baur (2019), who highlighted that the data is usually not produced for research purposes but is usually a side product of social processes. Process produced data such as administrative data that are collected by government ministries and organizations constitute an important data source that can be useful in research, but are often not sufficient alone to answer different kinds of research questions, especially when they are used in isolation. Whilst these limitations are evident and indisputable, it is equally clear that such data can be effectively harnessed to answer specific types of research questions, and this paper offers an example of the usefulness of process produced data in studying juvenile delinquency. This paper intends to use the Botswana Youth Risk Behavioral and Biological Surveillance Survey (BYRBBSS) by the Ministry of Basic Education as a form of process produced data set, to analyze the factors associated with juvenile delinquency in Botswana. Whilst this report in itself provides a basis from which to launch the study, it cannot answer other uniquely qualitative research questions that would require thorough descriptions from the juveniles involved in these acts of deviance. This paper therefore, uses this argument as a starting point to explore the possibilities and potentialities associated with combining process produced data with research elicited data, with the ultimate aim being to demonstrate how doing so offers more satisfying research results. Mixing Processed Produced Data and Research Elicited Data is a methodological approach that has not yet been extensively applied in the context of Botswana, and other African countries, and therefore the paper will open discussions on the possibilities of conducting research in this manner, especially where process produced data sets are publicly accessible and available.

05

Substance Use Disorders Scholarship in Botswana: A Methodological Overview

Keywords: Substance; Illicit Drug Use; Illicit Drug Trade; Education; Addiction; Methods

Lynne C.K. Mosomane ¹, Ndwana Tsimanyane ², Gabriel Faimau ¹

(1) *Botswana University of Science and Technology (BIUST), Botswana*

(2) *Botswana University of Pennsylvania Partnership, Botswana*

Over the past decades, there has been a rise in the use of substances in primary, secondary, and tertiary schools in Botswana, hence a need to find ways to mitigate factors that escalate the use. Botswana is small-populated country of about 2.359.609 million people according to the Population and Housing Census 2022, Population of Cities, Towns and Villages. It is a landlocked country situated in Southern Africa reading 581,730 square kilometers (224,610 sq mil). In 1966 it gained its first independence from British Protectorate. Like other neighboring countries in Southern Africa, education in Botswana is compulsory for pupils of ages starting between five and eight and ending between sixteen and eighteen years and it is provided by registered public schools and private schools governed by the Ministry of Education and Skills Development, and the Ministry of Tertiary, Research Science and Technology. However, this may not be applicable for private sectors in Botswana. The same ministries together with key stakeholders have acknowledged the rise of this concern and have implemented different strategies through scholarships to impart knowledge about the consequences of using illicit drugs. Illicit drug use has been one of the alarming socio-economic issues in Botswana.

The Government and various Non-Governmental Organizations (NGOs), have provided minimal strategies, rehabilitation and support services to addressing this critical problem. The complexity of this problem clearly affects many sectors as countries in Southern Africa, including Botswana, continue to face the challenge of illicit drug use and trade. Certain arguments indicate apparent benefits of illicit drug use and trade; however, the benefits are transient and outweighed by the health and financial burden on economies and societies ranging from value of drug law enforcement, legal costs, prison costs, care and rehabilitation costs, treatment of patients with drug-related conditions, premature mortality, loss of earnings and reduced productivity just naming a few.

Given the urgency of the matter, the issue has generated interest among researchers over the past two decades or so. While studies continue to suggest that substance use is prevalent amongst young people, particularly secondary school and college or university students, there is general consensus that empirical studies relating to illicit substance use have limitations linked to among other things the ever emerging and complex trends on trade and use of illicit drugs, individual as opposed to collaborative studies and the quality of studies conducted which leave researchers with insufficient data.

The limitations of empirical studies therefore call for critical interrogation of the methodological design employed in illicit drug use scholarship. This paper provides a methodological overview of the scholarly studies on the dynamics, control and reduction strategies of illicit drug use and trade in Botswana. In particular, the paper examines four overarching questions: First, in what context have research questions concerning illicit substance use in Botswana been framed? Second, what are the common research approaches adopted in various scholarly studies on this subject? Third, in what ways has the selection of research participants been determined? Fourth, what are the

typical methods of data collection used in substance use studies in Botswana? To respond to these questions, the paper examines substance use disorders scholarship in Botswana over the past decade. In doing so, we intend to uncover common methodological steps and epistemological approaches that underpin the illicit substance use and trade scholarship in Botswana. This will provide a basis for strategic mapping and agenda setting that will inform further studies in this particular research field.



SMUS23_06

Culturally Sensitive Approaches – Potential New Directions of Empirical Research

Session Organisers:

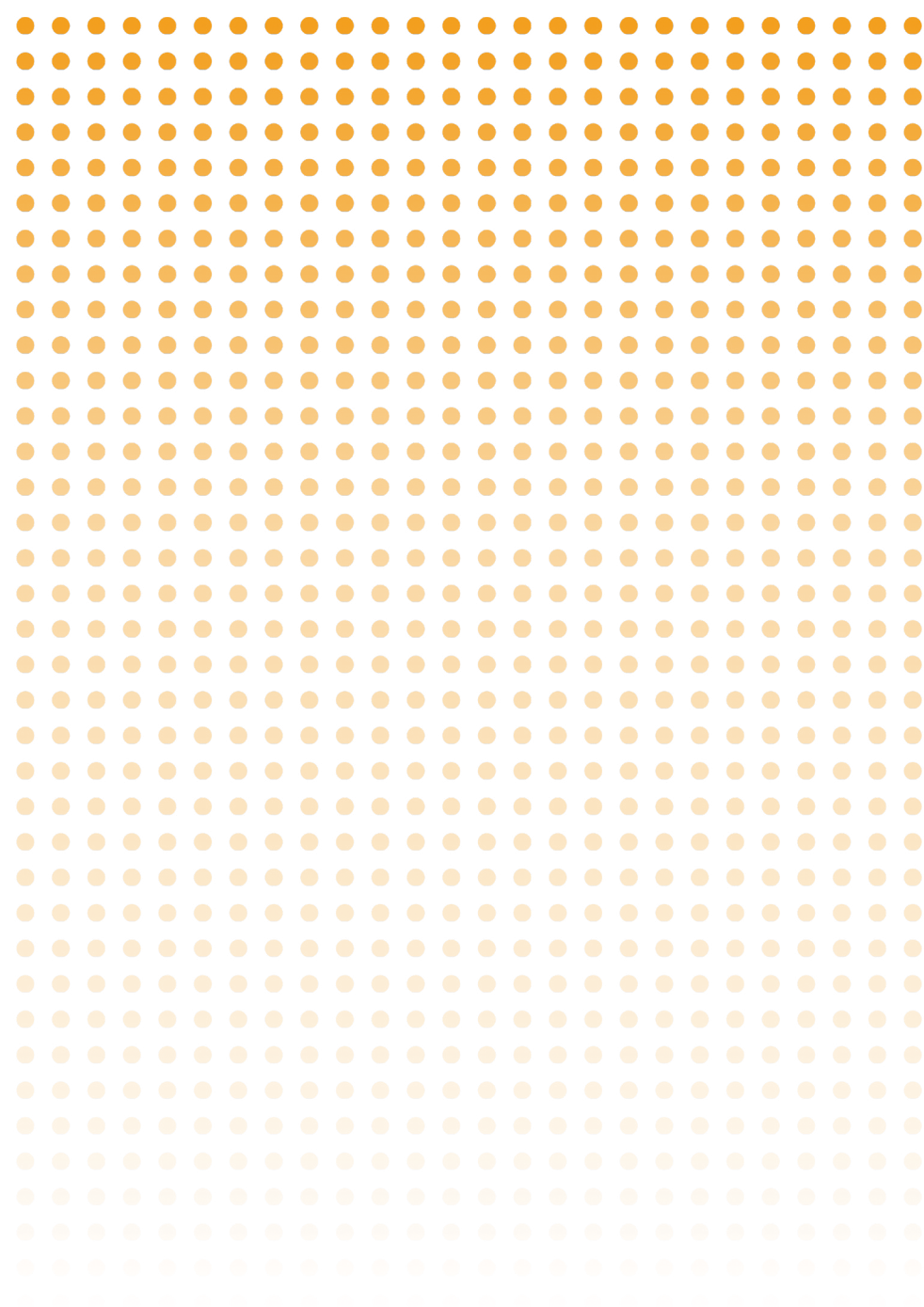
Wolfgang Aschauer

Associate Professor, University of Salzburg

Thomas Herdin

University of Salzburg





01

Future Directions for Cultural Sensitivity in Societal Development Science

Keywords: Culture; Psychology; Societal Development

Kuba Kryś¹

(1) Institute of Psychology, Polish Academy of Sciences, Poland

Contemporary societies are shaped by different histories, different institutions, different norms and different values. Up to now, conceptualizations of societal development were, however, mostly based on culturally universal paradigms. Cultural sensitivity in development science has been argued for since at least the 1960s, but has remained understudied. In the proposed presentation, I will overview empirical and theoretical steps we made into documentation of cultural diversity of preferred societal development pathways. I will discuss:

1. theoretical foundations of the idea of cultural sensitivity in societal development that we laid with our paper (Kryś et al., 2020),
2. ideas described in the special issue of the Journal of Cross-Cultural Psychology that was aimed at “Bridging (Cross-)Cultural Psychology with Societal Development Studies: Discussion on the Idea of Cultural Sensitivity in Conceptualizing and Measuring Societal Development”, and
3. findings from our first empirical studies on folk theorizing on societal development.

I will conclude the presentation by indicating future directions for cultural sensitivity in development science. People in all world regions deserve a societal development science that is informed by, and helps to explain, development processes in their local cultural contexts.

02

The Operationalization of Variables in Social Psychology Research on African Realities: A Perspective Towards the Decolonization of Knowledge**Keywords:** Operationalization of Variables; Social Psychology; Situationism; Pragmatism; African RealitiesHenri Rodrigue Njengoué Ngamaleu ¹*(1) University of Yaoundé I, Cameroon*

The debate on the decolonization of methodology in the pure sciences does not arise with as much interest as in the social sciences, no doubt because the phenomena studied by the former are culturally invariant and investigated with precision, rigor and objectivity, using experimental protocols; whereas, in the second we are dealing with humans and their activities, which vary extremely from one cultural context to another, and also softens the methodological approaches using to explore them.

Whether they are one or the other, teaching and research in Africa generally reproduce the models invented by Western academies and laboratories. Measurement appears to be an important operation in the administration of proof, especially since in an empirical or positivist approach, knowledge is the product of data obtained in the laboratory or collected in the field. Except that, in the context of social sciences, we will say mourning in Africa, while in exact sciences we will speak of the properties of the water molecule as such and not of those of the African water molecule.

What we measure and how we measure it becomes a crucial question. While this is important, it is not enough to simply ensure that the research participants are well selected, that a rigorous data collection protocol is developed, that the tools are constructed or chosen, that the data is collected reliably and analyze them using the finest methods. An excellent methodological protocol can lead to the measurement of phenomena other than those in which researchers interested in African realities want to study.

Carr and MacLachlan (1993, 1998) argue that the inferior status of psychology in developing countries has prompted researchers to make an epistemological assimilation consisting of replicating the work carried out in Western countries in Africa. African realities are therefore explored through the prism of Western psychology. Modalities and indicators of variables studied, resulting from the operationalization of variables, without interest in Western contexts are not considered, sometimes are ignored or discredited.

The operationalization of the variables is based on a review of the literature which generally proposes four types of elements related to: 1) the conceptual background of the study; 2) the theoretical background; 3) the empirical background; and 4) the methodological background. However, it is clear that the review of the literature in fundamental and applied social psychology is quantitatively and qualitatively produced by Western laboratories, whose work is generally funded to solve the problems facing their societies. The investigation of African realities presupposes submitting to the requirements of the operationalization of variables, which means indicating how we intend to measure them according to precise conceptual definitions. The discipline in which we are interested in the context of our analysis is indeed social psychology, of which we are a specialist.

The objective of our communication is to argue the importance of a philosophy of empirical

research which, through the adequate operationalization of the variables, would make it possible to produce scientifically valid knowledge on African realities, so as to read them differently than under the exclusive prism of Western situationism. We began this reflection in the context of a publication on the issue of situationism and pragmatism in black Africa.

After presenting the object of social psychology, its doctrine (situationism), its levels of analysis (intrapersonal, interpersonal, positional, and intergroup), the wealth of its concepts and theories, its methods, and its status as discipline of intersection between psychology and all the other human and social sciences, we will indicate how it has developed differently in Europe and in the United States, thereby reflecting the influence of the sociocultural environment on the development of science. It will then appear crucial to us to maintain that the decolonization of methodology in social psychology in the investigation of African realities does not mean reinventing the administration of evidence but rather producing scientifically valid knowledge which results from data reflecting and effective measurement of local realities. To do so, research in the psychology of African situations must assert the principle of the accumulation of knowledge oriented towards the resolution of social problems, in an applied research approach.

The state of the art, essentially made up of the literature produced by Western laboratories studying Western situations, is made up of a transcultural heritage that African researchers or those working on African situations should not ignore. It is therefore useless to question in vain the clearly established universal laws and principles which govern human psychology. What is problematic concerns locally true theories and models that would bias the problematization of African realities. This is where the major role of the operationalization of variables comes in.

It turns out that the empirical approach is dominant in modern social psychology and the variables, when they are not manipulated and observed within the framework of experimental or quasi-experimental studies, are generally measured using preconstructed tools (generally attitude scales) whose items propose North American, European and increasingly Asian and South American cultural indicators. Said tools measure variables conceptualized and explained by precise theories or models. Multiple works subsequently use them to mechanically measure the same variables and use advanced statistical instruments to analyze the data and achieve the production of increasingly refined knowledge.

When the items do not consider the particularities of the new contexts in which they are to be administered, the researchers conduct studies beforehand in order to adapt the tools to the environments concerned. Thus it is common to find through the literature scales constructed in a Western population, to be adapted in other Western countries. This is proof that they cannot be directly administered in African contexts which are still very different. We argue that the decolonization of methodology in social psychology should draw from these traditions. It is not the methodological principles in themselves that should be called into question, but the way to use them to produce valid data, that is to say those that truly reflect African realities.

We will try to show that a philosophy of research in Africa and the identification of local modalities and indicators are a way of emancipating social psychology of African's local situations. Regarding the philosophy of research, we believe that there is also no need to invent the wheel. American pragmatism, driven by authors such as Herbert Mead (1863-1931), John Dewey (1859-1952) and William James (1842-1910) who were all influenced by the philosopher, logician and semiologist Charles Sanders Peirce (1839- 1914), is a source of inspiration in that it advocates that the goal of

a scientific theory is not limited to explaining and predicting facts, but above all to improving the living conditions of populations.

Such a conviction would lead social psychologists in Africa and elsewhere to tackle efficiently local issues. Such a conviction would lead social psychologists in Africa and elsewhere to solve local problems through science. They will then be confronted with a major problem: the scarcity of literary resources in terms of relevant and up-to-date publications on related subjects. However, the literature review is essential in writing a quantitative research project. Scientific colonization will continue as long as psychosocial issues on African realities are mainly based on Western-inspired literature.

Akin-Ogundeji (1991) claims that psychology in Africa has remained in its infancy confined to universities and the academic field, unable to take an interest in the multiple aspects of national development. The author states that the valorization of the experimental method which distinguished psychology from philosophy, making it a science in its own right, did not encourage the use of psychology to improve the living conditions of populations. African phenomena are then assessed without an appropriate theoretical background and the comparison with Western cultural contexts is not properly made.

The decolonization of research in social psychology would therefore suppose a return to exploratory studies aimed first at documenting African realities (grounded theories). They would thus provide locally relevant indicators to build measurement tools for quantitative surveys aimed at generalizing the results. In this way, we would have access to increasingly abundant data and literature to guide what would become research traditions. We even propose the promotion of a psychosocial philosophy of African situations. It would then consist of critically exploiting the conceptual, theoretical and methodological repertoire of fundamental and applied social psychology to question African particularities. Thus will germinate arguments, sensitive to local variables, and which will open up relevant research perspectives. The achievements of research in Western environments would be re-examined by informed analysis. It will propose hypotheses that will guide the operationalization of the variables. They would also shed light on institutional policies on research management.

There will then arise the eternal problem of funding without which research in the social sciences in general and in social psychology in particular, will not produce relevant knowledge on Africa. However, until proven otherwise, when funded, research on the African continent benefits from foreign funds whose donors impose their agenda which are not necessarily the priorities of African states. Finally, examples of phenomena whose existing measurement tools do not sufficiently consider the elements of African situations, and which are therefore unsuitable, will be presented.

03

A Culturally Sensitive Approach to Measuring Happiness Across the World

Keywords: Culture; Happiness; Well-being

Kuba Krys ¹

(1) Institute of Psychology, Polish Academy of Sciences, Poland

How can one conclude that country A is happier than country B, when happiness is being measured according to the way people in country A think about happiness? In the proposed presentation we address this issue by proposing a new culturally sensitive method to measuring and comparing societal levels of happiness. We support our reasoning with data on life satisfaction and interdependent happiness collected across forty- nine different countries around the world. We demonstrate that the relative idealization of the two types of happiness varies across diverse cultural contexts and are associated with culturally different models of selfhood. In the proposed presentation, we introduce a new culturally sensitive method for calculating societal happiness, and examine its construct validity by testing for associations with the experience of positive and negative emotions and with individualism-collectivism. This new culturally sensitive approach represents a slight, yet important improvement in measuring happiness, carrying practical implications for well- being researchers, for social indicators researchers, and policy makers.

04

Assessment of Impact of Rivers on Hindu Culture and its architectural manifestation in cultural heritage: Case of River Narmada

Keywords: Sacred values associated with Rivers; River as a cultural resource; River Narmada; Narmada Parikrama ritual as a cultural heritage; Architectural manifestations of culture related to Narmada River

Kavita Murugkar ¹, Shubhashri Deependu Upasani ², Rabi Narayan Mohanty ³

(1) BVCoA, Pune, India

(2) Shri Shivaji Maratha Society's College of Architecture, Pune, India

(3) Indian Institute of Technology (IIT BHU) Varanasi, India

India's ancient culture is strongly threaded with its natural settings; hence, worshipping these settings, with the sense of their preservation, is a traditional and cultural practice. Among these natural elements, rivers, being a lifeline, are assigned a maternal place in the holy scripts. Along with the water source, river banks became the places of social gatherings, platforms for many rituals and formed a set of cultural activities. The cultural-natural aspects associated with rivers are manifested in tangible – intangible forms of the cultural heritage with its continuity values. For ages, cultural practices and sacred values have evolved in the places around banks of rivers, known as Tirthsthana (Tirth: holy water + Sthan: Place). Also, from birth to death, many rituals are associated and performed in these Tirthsthana. Commonly considered important, 7 sacred rivers in the Indian sub-continent are mentioned in the following 'Sholka' in 'Naarad Puraan'. The name of this country India is derived from one of such seven rivers, the Indus (सधु – हदु – हदुस्थान).

“गंगेच यमुनेचैव गोदावरी सरस्वती |
नर्मदे सधु कावेरी जलेस्मनि संनधिम कुरु ||
(Naarad Puraan, Adhyay 27)”

The Narmada river is one of these seven important sacred rivers. The Narmada river is the only river which has a separate Puraan assigned to it ('Narmada Puraan', a part of the ancient Indian Scripture – 'Skand Puraan', a separate Puraan) along with the different versions and periods of Mahatmya, Narmada Panchang and others. The tangible and non-tangible elements like the total number of Tirthsthana on both the banks, the concept of Parikrama, river location, mythological beliefs and narratives of Lord Shiva, Virgin River Narmada, spiritual values and others make the River so special. The latitudinal coordinates of the Narmada river separate the country into two parts (Northern and Southern parts). The path of this river gives the impression of a waistband (Kati-Mekhala) of personified the mother India 'Bhaarat Mata'. Hence, this river has a significant place in the social, cultural and religious developments of the Hindu religion.

The strategic location of the Narmada attracted many rulers and dynasties to conquer the region. Hence the culture flourished in the Narmada River Basin area and has footprints from history. The architectural spaces on both the river banks are reflections of the cultural and historical influences. The Tirthsthana around both the banks of the Narmada is mainly associated with Lord Shiva, and rituals like holy bathing, Kanya-Poojan, Kadh, Godi-Bharana, Sadi-Chadhaana, Pitru-Poojan, festival celebrations are carried out in these places. The most elevated cultural activity associated with the River Narmada is circumambulation (Parikrama) of the whole river, like a deity and a potential factor, that needs to be understood and interpreted with the tangible-intangible cultural heritage. The Tirthsthana are located in those very places because they are lying on the Parikrama Path with sacred values and mythological associations. The thread of the Parikrama concept is

playing a vital role in developing the culture in that particular natural setting which should be established based on scientific research.

Many scholars have studied the Narmada River Basin area from the perspective of geographical studies (Dr. Dharmendra Prasad, M.P.), paleontology (findings of the dinosaur fossils named *Rajasauros Narmadensis* by palaeontologist Jeffrey A. Wilson from the University of Michigan and other scholars), water distribution – pollution, archaeological studies, biodiversity, and the Parikramavasi or devotees of River Narmada have documented spiritual experiences, mythological aspects and mysteries related to the River. Dr. Jurgen Neub from the Free University of Berlin, Germany have studied and compared different versions of ancient scriptures for Narmada Puraan, Narmada Panchang, and Narmada Mahatyma. The Narmada River Basin area is a spiritually elevated and established region along with all these aspects. Based on the literature and background studies, it is understood that the cultural aspect is not yet established along with the concept of Parikrama. The possibility of ‘this specific landscape initiated the culture which vice-versa has influenced and shaped up the landscape’ is not yet studied and established. The cultural landscape of the Narmada Parikrama Path perspective is not yet explored. Hence awareness of cultural heritage, values and significance is missing and inviting the deterioration of the same. The research has been based on this gap.

The methodology for cultural heritage studies associated with the River Narmada and the concept of Parikrama as per the Hindu beliefs is the critical aspect of this research process. Hence defining the methodology and the research framework for conducting this study is the aim of this paper. This paper will formulate the need for this research along with the scientific approach behind the research design. The methods and techniques to generate empirical data in this research, the means of analysis and evaluation of the results are the objectives to achieve the aim of the paper.

The selection of Tirthsthana places for the sampling of empirical data collection, study of ancient scriptures and texts as secondary data collection, rituals - traditions related to the river Narmada through on-site surveys, participatory observations, questionnaire fillings by the stakeholders of cultural properties, inventory fillings for the heritage structures, generating architectural drawings and documentation of cultural resources are few of the methods, tools, and steps in the final methodology framework. Building the empirical data from the field study, based on the on-site observations, need a cross-sectional field research design and accordingly questionnaire building. A few of the methodological challenges in collecting empirical data for cultural heritage findings in this research area are due to some varying data sources like narratives, folklore stories and experiences of Parikramavasi, local people. Hence checking the authenticity of collected data, its repetition value, controlling the individual perspectives, emotions and views which can affect the analysis part of the research has to be dealt with to get genuine conclusions. Hence mixed approaches of Qualitative and Quantitative research have to be applied where collected data in terms of number and contents, plays a critical role and descriptive analysis can be adapted to carry out the research.

The paper focuses on building a methodology to overcome loopholes in dealing with cultural heritage studies in the case of River Narmada. The research design of this study will be a framework which can be used to identify the association of any River with respect to the cultural heritage of its banks with contextual changes from case to case.

It has been observed that, in the case of cultural heritage studies for River Narmada, devotional-emotional-mythological-mystery oriented psychology of Parikramavasi and local people divert the rational thinking towards the cultural heritage values of the region, causing the decline of the same.

Also, this psychology affects adversely on authentic empirical data collection. One must respect this psychology and develop the framework that will guide an authentic empirical data collection. Hence the results of this research paper are to establish the need of research area and to help in developing the methodology that will minimize the effects due to individual perceptions.

05

Confronting the Secular Bias in Researching African Societies**Keywords:** Religion; Secularism; Africa; Sustainable; CommunityLudovic Lado ¹*(1) CEFOD Business School, Chad*

I locate this submission in the framework of the decolonization of social science methodology from an african perspective. I was first exposed to debates on secularization theories a few decades ago as a student of sociology of religion. From there on, I took it for granted that secularization as the privatization of religion was a feature of every modern society including african societies. I went on to specialize in the anthropology of religion and I have learned over the years from both fieldwork and critical theories that it is misleading for a researcher to take the secularization of African societies for granted. I now argue that although African societies have assimilated a number of features of western modernity, they are still predominantly religious societies. I mean by religious societies those in which the majority of people are religiously affiliated and religion is not perceived as a private affair. Secular societies are those in which the majority of people consider religion as a private affair to be kept as much as possible out of the public sphere. In this second type of society, a substantial number of people claim to have no religion. What difference does it make methodologically to conduct research in these two categories societies.

Although African states describe themselves as secular, I classify them as religious societies not only because the overwhelming majority of african associate themselves with some form of religiosity but also because religiosity permeates most of the entire social fabric. Most Sub-Saharan African societies today are characterized by deep religious diversity resulting from complex historical processes. A number of these have experienced conflicts often labeled as interethnic or interreligious, therefore construing religion mainly as factor of social disintegration which should be contained by political secularism. Indeed, because of the recent upsurge of religious violence in the world, religion is often perceived as a threat to the sustainability and stability of societies marked by religious diversity. How are african societies managing religious diversity at the grassroots level?

This contribution is based on fieldwork conducted in the city of Bamako in Mali in 2016 on perceptions of both interreligious conviviality and conflicts in a Malian context marked by the resurgence of religious extremism. The study of the impact of religious extremism on interreligious relations on the African continent has yet to receive more attention in scholarship. Therefore, the main research question underlying this presentation is as follows: how do Christians and Muslims in Mali perceive religious extremism and its impact on interreligious relations in a context of the upsurge of violent extremism and of the persisting threat of Islamist takeover? On the basis of empirical data we argue that although Christian minorities have been directly targeted by some jihadist groups, the majority of Christians and Muslims still perceive religious extremism as a foreign import and construe religious conflicts as opposing mainly rival versions of Islam or of Christianity, with little impact on interreligious conviviality.

Sub-Saharan Africa has generally been credited with a long tradition of peaceful coexistence of religions until the recent wave of religiously motivated violence in Sub-Saharan Africa deserves

renewed scholarly attention. In 2012, jihadist groups temporarily controlled most of the northern part of Mali. During that period, the insurgents attempted to implement a form of Sharia law. Christians as well as Sufi Muslims became the primary targets of their violence. Mali has a population estimated in 2009 at 14,517,176, with more than 70% living in rural areas. The Malian population is predominantly young, with 46.6% of people under the age of 15. About 95% of the population are Muslim, and the remaining 5% comprises Christians and followers of traditional religions. Officially, Mali is a secular state and has enjoyed a long tradition of interreligious peaceful coexistence. Islam in Mali is characterized by the predominance of Sufi brotherhoods rooted in local traditions that now coexist with influential minorities of Wahhabism and Shi'ism. Catholics and Protestants make up most of the Christians, but pockets of Pentecostalism have found their way into Mali in recent decades.

Although scholars have questioned the relevance of Western models of secularization in the Global South, including Africa, little has been said about the related methodological implications with respect to studying religion. Secularism as the ideology of the promotion of the secular was introduced in Africa by Western colonization especially through the establishment and running of public institutions. But the practice of secularism is confined to a small urban intellectual elite in a continent that some have described as “inspired” (David Martin) because of the widespread predominance of religious interpretations of the world. This contribution attempts to explore the methodological challenges to the study of religion in African enchanted societies. The study of religion is based on a foundational distinction between the profane and the sacred, between the religious and the secular which can be traced back to the pioneers of the scientific study of religion such as Eliade, Durkheim and Weber. At a time when classical secularization theories are tested by the resurgence of religion in international politics, one wonders whether the distinction religious/secular is useful for the study of religion in Africa. Besides, the secular/religious demarcation plays out differently in Christianity and Islam, especially when both are mobilized to undermine the modern secular state and its liberal values.

Some methodological issues around locating the religious/secular in Africa, including but not limited to the following questions:

1. How does one circumscribe the object of religious studies in a context of enchanted societies where almost everything has a religious dimension and where religious/mystical interpretations of reality inheres in individual and collective representations?
2. Is the Western model of secularization relevant to the study of religion in Africa?
3. How does one locate questions around African religiosity within the context of the religious/secular debate?
4. What are the methodological implications of the religious/secular debate in the context of Africa?

The approach is critical of classical secularization theories that tend to construe religion as a divisive force to justify its isolation from other spheres of society. Ours is an integrative approach; indeed, if religion is seen as a force of social transformation, then it need not be isolated from other social spheres, especially in a context such as Mali. From this perspective, the ability of a religion to generate social conflicts or contribute to social harmony depends on how it is interwoven with other components of the social fabric. The theoretical framework of this paper is therefore consonant with the theory of the “ambivalence of the sacred” (Appleby, 2002), which postulates that religion can be mobilized both for violence and for peace, depending on a variety of other social factors.

06

Sociological Study of Inheritance using Multi-sited Ethnography: Methodological Reflections

Keywords: Family; Multi-sited Ethnography; Property and Inheritance; Sociology of Law

Ayushi Dube ¹

(1) Indian Institute of Technology Kanpur, India

Situated in the area of sociology of law, the paper offers methodological reflections drawing on multi-sited ethnographic research conducted to study the question of property and inheritance in Ayodhya — a site of longstanding communal conflict that has witnessed India's longest-running land dispute. Most cases arising from inheritance or property ownership issues initiate their legal life in district courts. But, district courts as sites of inquiry have seldom been researched in India. This is surprising considering that these courts are not only the first port of call for most legal disputes but also the juncture where society and law come in closest contact and where the pieces of evidence are first collected, and the constituent of cases take shape — later dissected and debated upon in higher courts. The study assesses how the theoretical assumptions of legal reforms on the subject of inheritance fare in praxis. The research draws from an analysis of property dispute cases, narratives of legal actors (lawyers and litigants, among others) in the district court of Ayodhya (India), interviews conducted with residents of two old age homes in Ayodhya, and an analysis of government reports.

Inheritance is reflective of broader sociological processes; hence, its principles and practices are key to all jurisdictions and societies. The development of inheritance law is shaped by the historical, cultural, economic and socio-political contexts. As a result, inheritance laws evolve differently in different parts of the world. Therefore, the dominant discourse on inheritance in a society needs to be understood in its historical, cultural, economic and socio-political context. Historically, most communities have had some normative and customary logic to legitimise how intergenerational property transfer occurs. In modern secular societies, the law has a more challenging role because it has to strive to constantly (i) remain in sync with the evolving notions of family and (ii) create a delicate balance between different interests within the family — it being a unit of incongruent interests). The situation turns more complex and precarious since there is a predilection to achieve 'equality' (and its conflation with 'uniformity') between different communities and also within communities on this account.

Sociology of law, in its essence, claims to be a discipline linked to the socio-legal realities. Thus, the need for it to be rooted in cultural specificity and diverse legal contexts can hardly be overemphasized. Scholars such as Werner Menski and Reza Banakar have rightly urged the need for better representation of diverse societies in order to address the global inequity of knowledge in the area of sociology of law. With most research on the sociology of inheritance based in Western contexts, the paper contributes to non-western epistemology of inheritance by conducting empirical socio-legal research.

The study focuses on two key themes:

- a. gender and private property rights
- b. elderly caregiving and inheritance

The first theme evaluates the impact of the 2005 amendment to the Hindu Succession Act (1956) — legislation that has crucial implications for women's right to property — on family relations. The Hindus comprise an overwhelming majority among the different religions in India. In Indian postcolonial legal history, there were attempts by the Indian legislature to reform and codify Hindu inheritance law in favour of daughters. The Hindu Succession Act (1956) granted equal inheritance rights to daughters in their fathers' separate/ self-acquired property (not the ancestral property). Later, the proclivity towards bolstering daughters' rights in Hindu property law culminated in the 2005 amendment to the Hindu Succession Act (1956) — a historic piece of legislation that endowed equal rights to daughters in ancestral property. However, it remains to be studied from a socio-legal lens whether this piece of legislation has brought an effective change in people's everyday lives.

The second theme considers that amid the looming grey tsunami, the context for most elderly abuse cases is a property dispute. In this context, it is imperative to explore the relationship between motives and decisions regarding bequests and elderly caregiving in Indian society in current times. To this end, the paper ascertains the trend of court judgments on bequest decisions and family care for the elderly in Indian postcolonial legal history. Who will care for the elderly, and how do such concerns regarding family care for the elderly affect an individual's bequest decisions? These questions lie at the heart of the present study. The paper analyses how family care for the elderly, filial piety, bequest motives, and decisions regarding bequests are connected in unique ways. Further, it examines the role of the modern welfare state in this dynamic.

Findings from the field demonstrate the significance of the question of maintenance and care. Over the years, the consistent tendency of the Indian state has been to take up less responsibility for the maintenance and well-being of women while securing their property rights within the sphere of their family. This is true in the case of the elderly as well. By capturing the lived experience of respondents, the study argues for the need to move beyond the rights discourse on inheritance and focus on the institutions of marriage and family that provide the grammar of kinship and community and lay the foundation for property transfers. It may also be mentioned that marriage and family are often not acknowledged as serious fields of research.

Ethnography accounts for cultural specificity because it enables the researcher to observe respondents' behaviours in everyday life, allowing for an inductive process of building from the data to broad themes to broader patterns, which can then be put into conversation with existing literature.

The methodological contributions of the research can be summarised as follows:

- a. Conducting an ethnographic study of inheritance law, in particular, proves useful in distilling insights into the subject of inheritance beyond the confines of academic theories and written law. In India, socio-legal research often bases its findings on official legal discourse (viz. judgments, statutes, scholarly commentaries, and legislative records), which falls short of capturing the law in practice. The study moves beyond this and contributes to law-in-action literature by unearthing the narratives of legal actors, which otherwise remain eclipsed from official legal discourse;
- b. It utilizes Hindu inheritance law as a case-in-point to analyse the question of inheritance in the Indian context. Further, it helps identify the significance of social institutions (especially the family) and shared culturally based values by placing a family-based understanding of inheritance in the Indian context in the foreground of observation. Thus, moving beyond the

- popular rhetoric of gender rights in the discourse on inheritance, it brings back the focus on the question of maintenance and care;
- c. District courts as sites of inquiry have seldom been researched in India, partly due to the onerous fieldwork required. Hence, the selection of district court of Ayodhya as a field site fills the research gap;
 - d. It captures the collocation between civil and revenue courts in property dispute cases; and
 - e. It analyses for the first time the impact of the 2005 amendment to the Hindu Succession Act (1956) on family relations, by capturing the reality both within the precincts of court as well as in old age homes via multi-sited ethnography. Interviews conducted in old age homes offer insights into the care perspective in the inheritance discourse, illustrating the factors at play outside the precincts of the court, which sometimes tend to impact the practice of written law.



SMUS23_07-01

Application of Quantitative Techniques in Spatial Analysis

Session Organisers:

Shubhajit Sadhukhan

Associate Professor, Indian Institute of Technology Roorkee

Dimitri Prandner

University of Salzburg

Wolfgang Aschauer

Associate Professor, University of Salzburg

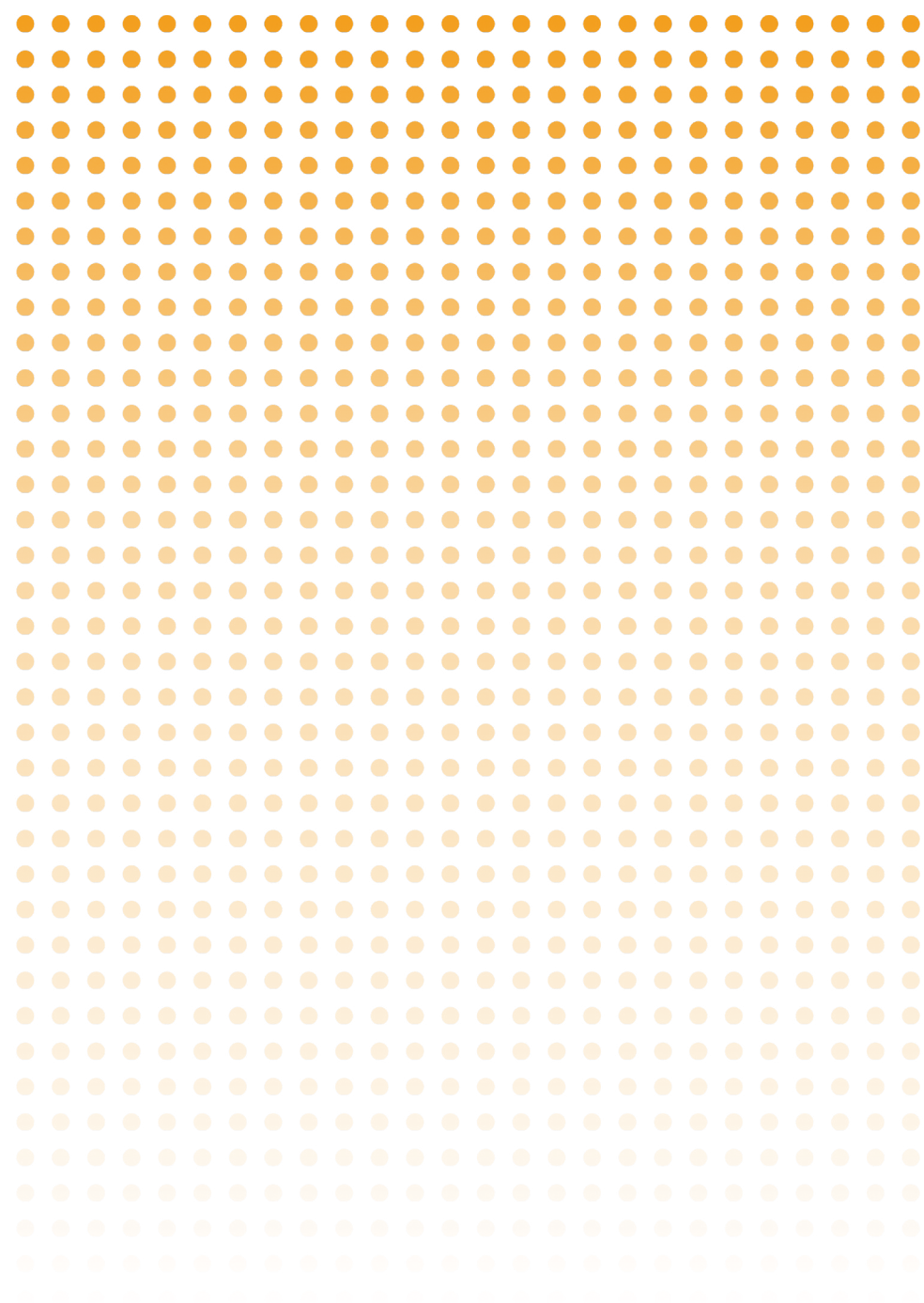
Martin Weichbold

University of Salzburg

Alexander Seymer

University of Salzburg





01

Incorporating Urban Analytics to Propose A Framework for Comprehending Public Realm in Self-Organized Settlements Of Indian Cities

Keywords: Self-Organized Settlements; Urban Analytics; Network Theory

Pradipta Banerji¹, Aneerudha Paul¹

(1) Indian Institute of Technology Bombay, India

Self-organized settlements form a majority of the urban fabric of Indian cities. It has been so historically, and it holds till today. In actuality, it might have increased. According to Ananya Roy, the fast-paced growth of the Indian economy in contemporary times has produced either gated enclaves for the rich or such self-organized settlements that she identifies as “informal” (Roy, 2009). Historically, such self-organization processes were often under the supervision of kings or religious institutions, who donated lands to their noblemen or temple officials, who would invite farmers or craft people to settle on lands they owned (Thakur, 2002). In contemporary times, self-organization is seen in the process of urbanization in many Indian cities and takes different forms. It is witnessed within the “lal dora” of the urban villages in Delhi, or “gunthewadi” in cities of Maharashtra like Pimri Chinchwad, or “B Khata” development of Bangalore, or refugee colonies of Kolkata, or informal settlement of Mumbai. Most such settlements are self-organized by multiple stakeholders. These might be existing communities of farmers, landlords, developers and, builders, migrants, who often spontaneously form such developments. The legality of such settlements is often in question. For this, these resident communities of such settlements, over time, mobilize authorities and local politicians to regularize their land and lay claim to infrastructure (Benjamin & Raman, 2011). In many cities in Latin America where such settlements exist, scholars like Hernando De Soto refer to them as extralegal and not illegal. He argues that such settlements have “enormous” economic activity concentrated in them and thus are productive (Soto, 2000). Knowing that a sizeable amount of people, in Indian cities, live in such settlements, the authorities have numerous responses to such urban conditions. One is that of regularization of such settlements if they are informal. The other is that of redevelopment. Authorities, especially in large cities, call for rehabilitating the existing population within high-rise, high-intensity development by private developers, and provide them with necessary incentives to exploit their real estate potential. This is done with an attempt to transform such cities into global centres for finance and capital. However, is such an approach might not have positive outcomes for the rehabilitated population.

Such settlements, whether historic or contemporary, house varied types of activities crucial to the function of the city. Dharavi an informal settlement in Mumbai, houses activities like recycling, textile/leather manufacturing, food making, etc. Some of its nagars produce products like textiles and leather that are exported globally. Moreover, such settlements often provide affordable housing to people who strategically locate themselves near their workplaces. Redeveloping these settlements often leads to losing important livelihoods for these people.

Thus the primary exploration this paper would like to undertake is to study the morphology of such settlements. Such settlements that are spontaneous and informal do not follow norms and standards that are set by planning authorities. Documenting the morphology of such settlements, along with the lived practices, would give us an insight into their public realm. Often their public realm is formed of intricate street patterns that have been established over time. Such networks form a continuum of space that provide mobility as well as active space for its residents

This paper makes a case that there is a need to computationally understand the nature of the public realm of such settlements. For this the paper proposes an urban analytic approach to observe and comprehend the morphology of such settlements. This approach can convince authorities to be sympathetic to such settlements and take appropriate measures to intervene in them. It is an example of how “Ordinary Cities” as proposed by Jennifer Robinson can be planned that would lead to the least disruption in people’s lives. In such cases, the transformation is more evolutionary and in sync with the economic and social capabilities of a certain community, in a given context. To this end, the paper will use urban analytics to reveal the patterns in the physical setting that allow for a certain community to thrive. The use of urban analytics to comprehend urban morphologies has been attempted earlier by other researchers. But this paper would like to expand this to understand the correlation of morphological patterns to lived practices and create a framework to comprehend public spaces that are observed in such settlements.

This work involves the use of the theory of network and fractal analysis that would be used to computationally understand the complexities of morphologies of such self-organized settlements. The paper uses the OSMnx platform that Geoff Boeing has created for the analysis of spatial data that is already available through Open Street Maps(OSM) (Boeing, 2017). As we know, OSM is an open source platform where anybody with skills of using a mobile phone can add spatial data that is free and available to everybody. Though some training is required, to feed data into the platform in form of GPS tracks, or footprints of buildings, it is widely being used by researchers as well as communities to know their neighborhoods.

This data is then analyzed through python-based coding on the OSMnx platform to analyze street patterns and urban form. To comprehend the fractal dimension of urban morphologies, this paper will use another open source platform called, Fractalyze. Fractalyze, is developed by Gilles Vuidel in the frame of research activities of Pierre Frankhauser and Cécile Tannier at the Théma laboratory (Besançon, France). This method will lead to the comprehension of a completely new set of metrics (as far as Indian cities are concerned) like street length density, node density, intersection density, average street length, circuitry average, orientation entropy, fractal dimension, etc. It will expand the existing tools like FSI, building heights, ground coverage, and open space percentage that city authorities presently use to guide and understand the urban form of cities. The paper’s primary assumption is that such a study of urban form can lead to a new comprehension of the public realm in our cities. It expands the notion of the public realm, that is considered to only include reserved open spaces that authorities protect. While such an understanding might be relevant for planned areas, it might not be relevant for self-organized settlements in our cities. Also public realms in the case of self-organized settlement are used for complex interaction resulting out of the daily act of living, working and recreating.

Finally, this paper will correlate these morphological patterns with the practices of people observed on-site. It will relate to their economic practices, use of the public realm based on gender, age, religion, etc., inhabitants’ mobility characteristics, sustainable practices related to water, sewage, and solid waste, and methods of self-governance. It will provide us with a deep insight into how the physical setting of such settlements and its evolution is enabling or disabling for the inhabitants in the act of conducting their everyday life. To cite an example: in many cases, it is observed that the small entrepreneurship that the inhabitants of such self-organized settlements have, are because of the nature of their morphology. The presence of such activities finally informs their public realm. However, this is completely lost when they are rehabilitated into high-rise apartment buildings. For the paper we propose to present at the conference, we would analyze some nagars of Dharavi,

Mumbai. These nagars would be varied setting of self-organized settlements that will give us a deep insight into the construction of their public realm.

02

Analytical Identification of Vacant Urban Land (VUL) in Patagonia Argentina: The Case of the Municipality of Camarones, Argentina**Keywords:** Vacant Urban Land; Camarones; Urban Planning; Spatial Analysis; Urban StrategiesMitchell de Sousa ¹, Andrea Schaer ¹, Fernanda Sofia Rodríguez ²*(1) Technische Universität Berlin, Germany**(2) Universidad Nacional de la Patagonia San Juan Bosco - Sede Trelew, Argentina*

Being framed in a competitive economy, the localities that fulfilled a function of regional supply in terms of medium-sized localities and thus within the orbit of the networks of relations of the global economy, find themselves in turn competing with these others. In terms of the logic of the capital itself, the territory is profoundly transformed and takes advantage of the limitations of the regulations to mitigate such capital relations, the negative consequences of development will lead to contradictory territorial processes that will affect the population.

Camarones was consolidated from the extensive cattle raising activity, historically and temporarily predominant in Patagonia. It is currently an important fishing port in the province of Chubut. Due to its relevance as an intermediate locality between the urban centers of Trelew and Comodoro Rivadavia (equidistant from both at 250km). It is strategically positioned in the productive circuit between the logistic mobility of the major localities of the province. Because of this, the potential as an enclave for the development of productive forces both as a tourist port for cruise ships (Cohen et al, 2020) and as a center for the concentration of food processing production is currently under public debate.

Moreover, The Vacant Urban Lands (VUL) represent those urban spaces in the consolidated fabric of the city that are currently in disuse, but that continue to play a role in the production of urban surplus value in socio-urban relations. It is the weight of the exchange value of a property considering the effects of the urban price increase and its quality of remaining in such condition to prevail its element as an exchangeable good for its potential use.

The review of the land use plan of Camarones modifies the current territorial relationship of the property to adapt to the prevailing norm of the urban logic thought from the perspective of vertical land use planning, shaping a relationship with the territory that ends up modifying the logics, which until now prevailed among the neighbors of the locality. An identification of the VUL considering the local particularities and understanding the logic behind the territorial subdivision of the current revised urban plan, will allow a tool of territorial construction from another logic, understanding how these processes take place and what strategies allow maintaining a link between the local and the pressures of speculative capital. Given this particularity, the questions that arise are: Is the reclassification of the VUL into first class localities sufficient to explain and understand the particularities of the VUL in Camarones? What strategies can be elucidated from the application of the reclassification of the BUOs in the territory of Camarones? Are there other types of dynamics to consider and thus continue formulating the concept of the VUL?

The methodology adapted from the reclassification groups the VUL in three universes, firstly, the previously and not previously constructed VUL (PUDL); then the buildings already constructed but in derelict state (DB); and finally, the Partially Occupied Land VUL (POL).

This classification is evaluated based on the official land parcel taken by the authorities that have jurisdiction over the plan with the city lots. Based on the official parcels and through a geographic information system, the classification of the territory is counter-checked through public data sources, interpretation of satellite images and on-site terrain verification methods. Once the BUOs are mapped, they are compared with municipal authorities and semi-structured interviews with a representative sample of the population that is grouped or recognizes the BUOs defined in their proximity to understand the particularities of the urban dynamics.

The municipality of Camarones has a representative number of PUDL and POL in contrast to DB. This is due, firstly, to the regular growth of its population and secondly, to the change produced by the revision of the urban codification that has changed the logics of territorial appropriation. It should also be mentioned that the provincial state builds and distributes social housing, occupying previously unoccupied land far from the urban center.

This research raises questions about the construction model of the city's compact density, the size of the lots and the logic behind them. Given that spatial appropriation has a different meaning in municipalities that have historically understood space in a different way, the strategies that can be proposed from this survey require rethinking the productive logic of the city. The municipality of Camarones can be a starting point in the construction of the city from the community's own logic that can redefine the urban territorial imposition of the strategies imposed by the productive capital.

The result of this classification will be the basis for the design of new methods that may result from the intervention of the different proposed classifications of VUL, understanding that they acquire and require interventions tailored to local realities.

03

Understanding Spatio-Temporal Mobility Patterns for Bus Commuters Using Smart Card Data**Keywords:** Transportation; Spatio-temporal; Mobility Patterns; Smart Card Data; GISParth Mukesh Jhaveri ¹*(1) Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, India*

In almost every subject of study, data in a variety of forms is crucial to the decision-making process. The types of research that can be conducted and, consequently, the information that can be learned from data are determined by the availability of data. The availability of data has dramatically increased as a result of the recent decade's tremendous technological advancement. Technology has made passive data collecting, often known as big data, possible and has replaced the exclusivity of intentionally obtained data. Big data is a term that has arisen to describe the enormous amount of data that is available in many different industries. Big data offers a wide range of possible applications and effects in the transportation sector. Big data applications in transportation have mostly concentrated on two sub-fields: road users' behavior and public transit operations. Big data has been utilized in transportation research across a variety of themes, including service provision, traffic, environmental implications, infrastructure/route upgrades, and the behavior of services and individuals.

In Public Transportation, the three main categories of big data sources are Automated Fare Collection (AFC), Automated Vehicle Location Systems (AVL), and Automated Passenger Counting Systems (APC). Numerous research suggests possible applications for AVL and AFC in public transit performance analysis. The extensive passenger O-D across the city has been highlighted by the massive data gathered from AVL and AFC. The Smart Card or AFC is just a piece of plastic the size of a credit card with an embedded microprocessor. The Smart Card, whether contactless or not, is employed in a variety of industries, including banking, government, healthcare, human resources, and, of course, transportation. The card is used to store identification, biometrics, photographs, fingerprints, medical information, DNA results, religious affiliation, financial information, transportation fare information, and other personal data. Transit agencies are interested in this type of technology, and many of them are currently using smart cards as a practical alternative to conventional magnetic cards or tickets. It is regarded as a safe way to validate users and pay fares. As the driver no longer needs to collect the fare, it also makes their job easier. Transit operators, transportation planners, and academics can use smart card data for public transportation studies at the strategic, tactical, and operational levels in addition to the primary goal of revenue collection.

Transport planners attempt to design transit facilities that will promote the use of public transportation over private automobiles. A great chance for transit planners to access spatial-temporal data that can be utilized for a deeper understanding of human mobility and the functioning of a transit system arises as public transportation agencies progressively adopt the usage of autonomous data-collecting systems. Smart card data can be used to study a full network periodically and to create realistic estimates of passenger origin-destination (OD) patterns, in contrast to traditional surveys, which are typically time-consuming, expensive, and of the "single image" kind. Transit planners must develop methods for correctly predicting OD matrices using smart card data. Understanding travel demand will make it easier to develop suitable public transportation routes and result in

schedule optimization. In turn, this will increase the use of public transportation, potentially leading to an improvement in the efficiency of the system.

There are a variety of people living in urban areas conducting a variety of activities. Different people have different choices in terms of route, mode, and time of travel based on the trip purpose. The mobility of individuals is different for different age groups, occupations, incomes, and gender, based on peak hours, commute distances, and specific locations for travel. Henceforth, Human mobility is susceptible to collective dynamics that are the result of multiple individual choices. Even though individual needs and travel preferences vary greatly and the urban and regional environments in which they are located are highly diverse, there is evidence to suggest that human mobility exhibits several recurring characteristics throughout history and across geographies. The present study focuses on estimating passenger mobility patterns using smart card data.

This study examines the use of smart cards by senior citizens, students, and differently-abled and woman bus commuters in Surat city, to suggest a way for identifying the underlying spatiotemporal mobility patterns. Different behavior patterns of different commuters could be recognized based on peak hours, commute distance, and specific locations for travel. The main contribution of this study includes (1) differentiating between transfer and activity (2) estimating the origin and destination matrix to understand the travel demand (3) detecting Spatio-temporal patterns for different commuters and (4) developing visualization for the Spatio-temporal patterns. Based on automated fare collection data, a variety of techniques can be used to estimate the OD matrix, including the Furness method, the Fusion approach, Multiple Linear Regression, Iterative Proportional Fitting, Maximum Likelihood Estimation, inferring alighting stations using both forward and backward algorithms, and the trip chain model. The Trip Chain technique is used in the following study to estimate the OD matrix. While making a journey, few passengers may participate in short, location-specific activities that make it difficult to distinguish between a transfer and the end of the trip leg. Therefore, it is typically difficult to distinguish transfers from an activity from the smart card data. Henceforth determining the exact origins and destinations of passengers, it's crucial to distinguish transfers from location-specific activities. Based on the size of the city and the distance between the stations where the transfer is to be done, a transfer time threshold is established to distinguish between a transfer and an activity.

Further, clustering techniques are used to examine temporal and spatial travel patterns, typically by origin and destination and by the time of day for different card-type commuters. It is used to categorize passenger behaviors, quantify their variability, and provide other useful statistics of passenger movements by using patterns such as travel frequency, timing, origins and destinations, and trip chains. Analyzing common travel patterns among groups of passengers could be beneficial for analyzing current and future transit market segments and developing viable information and service strategies for these markets. Finding the travel habits of particular passenger market categories has been the subject of a different line of research; this could be crucial for public transportation marketing, informational campaigns, and gauging how customers will react to service improvements.

04

Ageing Indicators, Population Growth and Implications for Sub-National Population Projections in Small Areal Units - Evidence from Trinidad and Tobago Census Data**Keywords:** Caribbean; Trinidad and Tobago; Small Spatial Area; Population Projections; Mathematical ModelsGodfrey St Bernard ¹, Hafeeza Hosein Shah ¹*(1) SALISES, The University of the West Indies, St. Augustine, Trinidad and Tobago*

Aging is a common phenomenon in Caribbean societies and perhaps an indicator of prospective trajectories with respect to population growth rates in different spatial contexts. Modeling this phenomenon is likely to inform growth scenarios in the context of sub-national population projections that estimate future population sizes in domains classified as either urban or rural. At the national level, the Cohort Component Method is a principal methodology for obtaining variable trajectories of national population sizes, annual population growth rates, age-sex population structures and magnitudes of vital events for short to medium-term demographic trajectories into the future.

Given that there is no universal remedy for accurately capturing the population size outcomes associated with social, economic, cultural, demographic and international dynamics, whether for small areas such as communities and municipal areas, mathematical models and statistical techniques do ably come to the rescue, rendering a helping hand to overcome absolute ignorance and permit sufficiently plausible estimates and projections of population size targeting small areal units within a national context.

With reference to localised small communities, the relative sizes of population 65 years or older and under 15 years provide a basis for gauging aging. In aging communities, the former increase while the latter decreases. In accordance with demographic theory, changes in the relative sizes of these population sub-groups are the causes and consequences of temporal dynamics reflected in fertility outcomes, mortality experiences and migratory currents in localised small communities across Trinidad and Tobago. Given the reciprocal relationship between these age-determined population groups and the principal components of population change, it is worthwhile to examine systemic patterned relationships that exists between relative population sizes and prospective rates of annual population growth.

Using sub-national geographic spaces, the paper seeks to explore whether there exists a statistical relationship between aging indicators and measures of population growth drawing on intercensal population dynamics in Trinidad and Tobago. The paper also seeks to assess the impact of aging on population growth controlling for other influential population dynamics.

Using sub-national geographic spaces, the paper seeks to explore whether there exists a statistical relationship between aging indicators and measures of prospective population growth drawing on population characteristics from the 2000 and 2011 Population and Housing Censuses in Trinidad and Tobago. For all communities in Trinidad and Tobago, the paper seeks to assess statistical associations between aging indicators from the 2000 census and annual rates of population growth during the 2000-2011 intercensal period. The paper also seeks to explore a hypothesized patterned effect that variation in aging indicators between the census enumerations will likely have upon prospective intercensal annual population growth rates controlling for urban/rural character of

spatial areas. Essentially, the aim of the paper is to use statistical principles associated with correlation and regression analysis to permit projections and forecasts of population sizes across short to medium term projection intervals for small localised communities. These will be done separately for male and female populations.

Targeted Research Hypotheses and Research Questions

Research Hypothesis #1: For each of male and female populations in communities, are there strong negative associations between percent 65+ years and prospective annual rates of population growth during the intercensal period across communities in Trinidad and Tobago? Note that the range of r is hypothesized to be as follows: (i.e. $-0.5 < r < -0.3$) where r is the Pearson's Correlation Co-efficient. The percent 65+ years is computed for 1990 and 2000 and correlated with estimated population growth rates for 1990-2000 and 2000-2011 respectively.

Research Hypothesis #2: For each of male and female populations in communities, are there strong positive associations between percent under 15 years and prospective annual rates of population growth during the intercensal period 2000-2011 across communities in Trinidad and Tobago? Note that the range of r is hypothesized to be as follows: (i.e. $0.3 < r < 0.5$) where r is the Pearson's Correlation Co-efficient. The percent under 15 years is computed for 1990 and 2000 and correlated with estimated population growth rates for 1990-2000 and 2000-2011 respectively.

Research Question #1: For each of male and female populations in communities, what is the magnitude of the estimate of the regression parameters for each of the two aging indicators controlling for urban/rural character of communities. This is done for the intercensal periods 1990-2000 and 2000-2011 relying on magnitudes of percent 65+ years and percent under 15 years for the periods 1990-2000 and 2000-2011 respectively.

Data and Methods

In Trinidad and Tobago, a probability sample of enumeration areas stratified by urban/rural characteristics will be selected and intercensal changes in selected population attributes including aging will be computed in order to examine their association and impact on population growth. The changes focus on two intercensal periods – 1990-2000 and 2000-2011.

The source of the input data is the Central Statistical Office, Population and Housing Censuses of 1990, 2000, and 2011 conducted by the Central Statistical Office, Trinidad and Tobago. The unit of analysis is a localised spatial unit classified as a community and disaggregated according to male and female populations, and urban/rural spatial areas. The attributes of interest include two aging indicators and prospective intercensal annual growth rates.

Operational Definitions

Aging Indicators: Proportion of population under 15 years in 2000 = $pi_{<15}(2000)$

Proportion of population 65 years or older in 2000 = $pi_{65+}(2000)$

Prospective Intercensal Population Growth

Exponential Growth Rate between populations for census dates between 2000 and 2011 = $ri(2000-2011)$

Urban/Rural Character (U)

Dummy Coded such that Urban = 1 and Rural = 0

Estimating Annual Growth Rate based on exponential trending

- $ri(2000-2011) = (1/n) \ln (Pi2011 / Pi2000)$
- n is the time in years between the two census dates in 2000 and 2011
- $Pi2011$ is the total population size in community i on census day 2011
- $Pi2000$ is the total population size in community i on census day 2000

Hypothesized Model

Estimating annual growth rate for 2011- 2021 based on exponential trending

Predicted $ri(2011-2021) = b_0 + b_1 pi<15(2011) + b_2 pi65+(2011) + b_3 U_i$

- b_0 = intercept
- b_1 = estimated effect size for $pi<15(2011)$ controlling for $pi65+(2011)$ and U_i
- b_2 = estimated effect size for $pi<65+(2011)$ controlling for $pi<15+(2011)$ and U_i
- b_3 = estimated effect size for U_i controlling for $pi<15(2011)$ and $pi65+(2011)$

Implications of Results:

The research proffers a model for predicting the exponential population growth rate during intercensal periods for communities classified as small localised areal units in Trinidad and Tobago. The model can be used to estimate and project population sizes where there are data challenges associated with the unavailability of data or data for which their quality is compromised and alternatives are required to derive more robust estimates of population size. The model can be applied to all communities in Trinidad and Tobago, separately for males and females and aggregated to obtain estimates of population size for both sexes; whether in urban or rural areas. The results are generated in accordance with the principles of inferential statistics and provide ranges for descriptive indicators permitting analysts to advance claims grounded in critical empirical evidence.

Some Recommendations for the Future:

First, the paper provides a platform for testing for forecast accuracy once population size counts for communities become available based on subsequent Rounds of Censuses. This is a good test for the validity of the model. Having derived community-level population size estimates, opportunities arise for considering other mathematical models to determine age-sex structure and other compositional features primarily of a socio-economic nature. There are also opportunities to consider additional control variables and test for improvements in goodness of fit. Finally, it is possible that the hypothesized model can be replicated in other Caribbean jurisdictions to enhance its external validity.

Concluding Remarks:

This paper has implications for establishing a model that can be tested in other national settings and thus have utility in preparing sub-national population projections/estimates targeting small, localised, spatial areas in Caribbean countries. The findings emerging from this paper may be especially relevant in terms of public policy targeting small area populations, particularly with respect to determining population-based temporal transitions as urbanised communities evolve in the future.

05

Tourism Circuit Design for Pedestrians using Genetic Algorithm – A Case of Bodhgaya, India

Keywords: Heritage Tourism; Genetic Algorithm; Tourist Circuit; Shortest Path

Namia Islam ¹, Abhishek Kumar ¹, Shubhajit Sadhukhan ¹

(1) Indian Institute of Technology Roorkee, India

Tourism is an important industry contributing to the India's economy. It provides employment, revenue, and foreign exchange at a significant level. In 2019, the direct contribution of travel and tourism to the GDP in India was 108.3 billion US dollars. That makes 6.8 percent of the total GDP. Heritage often refers to the generic expression of how a way of living is developed in a community and transferred on to the coming generations. The heritage includes (but not limited to) customs, places, sites, objects, works of artistic values, etc. India is widely popular for its cultural heritage among tourists. Cultural heritage acts as a locus for attracting pilgrims and tourists in the Indian context. Heritage tourism is ranked third among the purpose of travelling, besides shopping and outdoor pursuit (Shankar, 2015). There are fifteen tourist circuits comprising of many cities developed under the Swadesh Darshan scheme by the Government of India. Buddhist circuit is one of them popular among Buddhist tourists. Many heritage buildings do not have parking facility with them. Also, the vehicular movement is discouraged in heritage areas to avoid traffic congestion, air pollution and sound vibration. Tourists generally prefer to walk as sightseeing places are near to each other. Hence, pedestrianized zones have been developed in core area of heritage cities. Within a pedestrianized zone, tourists easily get tired due to excessive walking. As a result, they often skip many locations that could have been visited. These locations are losing their importance gradually because of less tourist footfall. There is a need to develop an optimized path for pedestrian tourists to visit all locations within minimum walking distance to explore the untapped potential of these less visited heritage sites.

Ancient Indian towns were organically planned with irregular street pattern where there are many options to reach a single destination. The tourists often get confused and choose a longer route which in turn discourages them to further visit next location. In such a scenario, the most popular or known destinations are generally visited by the tourists, leaving other destinations in the vicinity unexplored, despite having high heritage value. So, it is necessary to develop a defined network (circuit route) in pedestrianized zone where walking distance can be minimized. With technological development, it is not a limitation to calculate complicated path problems. In general practice, till date the walking tours in India also known as 'Heritage walk' especially in core areas of old cities are designed in a linear path fashion. There is a challenge to include off-track location through manual path designing while covering the minimum distance. So, this study proposes a solution, in which a designated walking route (path) is designed which will be an attraction in itself. This route will cover all the desired locations in an area while covering the overall shortest distance. This will help tourists in saving their time and energy.

Bodhgaya is one of the important tourist destinations among others in the Buddhist circuit in Gaya district of Bihar state. The place is marked by the incidence of Prince Siddhartha attaining enlightenment under the Bodhi tree and further becoming Buddha. The city is, hence, named Bodhgaya. Mahabodhi Temple, (a UNESCO World Heritage site) being the prime historical monument in the city, was originally built by King Ashoka on the bank of Niranjana River in 3rd

century BCE to commemorate Buddha's enlightenment. Apart from Mahabodhi Temple, there are several other Buddhist temples and monasteries in the city with their unique architectural styles, which correspond to the temple architecture of different Buddhist countries, especially south-east Asian countries. The area around the Mahabodhi temple is pedestrianized during important festivals and fairs. There are several lesser-known Buddhist temples and monasteries in close proximity of Mahabodhi Temple which are often left unexplored by the tourists. In this study, the authors have identified fifteen locations in Bodhgaya out of which fourteen are the tourist sightseeing locations and one starting location which is the existing parking facility outside pedestrianized zone. So, the aim is to suggest the shortest path through which the tourist can visit all the fourteen locations and come back to the parking area. All the other factors affecting the quality of walking are not considered as a part of this study. Only consideration of the shortest walking route is within the scope of this paper.

The shortest walking distance between any two geographical points, x and y , can be computed with the google map data. A matrix of such n points is used to generate the distance matrix. Further the problem in this study is similar to travelling salesman problem (TSP). In TSP, a person starts his journey from one city and visit other cities just once with the minimum shortest distance possible (Lima et al., 2001). This aligns with the Hamiltonian cycle concept, in which each location is treated as a vertex and these vertices are visited only once with a single entry and exit point (Jia et al., 2022). The possible unique number of solutions are $“(n-1)! / 2”$. When n is greater than 6, it is hard to manually compute the shortest path and the process will take longer time.

In the problem to find the best route with more than six locations, soft computing is the most common optimization technique. Nearest-Neighbor Algorithm, Closest Insertion algorithm, Geometric algorithm and Genetic algorithm are the common methods to solve TSP. For more number of destinations, the Genetic Algorithm is better than the others for solving TSP (Khan, 2016). Genetic algorithm is based on natural science with the concept of biological evolution theory where best genes are transferred in the next generation. there are five steps starting with identifying the population, defining the genes, defining the fitness string, crossover of the fittest genes, and mutation to generate the next generation of population. This iteration is repeated until the best possible genes are concentrated together in a single string (Damos et al., 2021).

In this study, the core heritage zone of about 1 sqkm. area of Bodhgaya was selected. It is a fully pedestrianized area with a single-entry point from parking (PAR). Within the area, fourteen tourist locations such as temples, monasteries, museums, and heritage buildings were identified through online database of TripAdvisor website, discussion with experts, and an on-site observation survey. The selected locations are Mahabodhi Temple (MBT), Great Buddha Statue (GBS), Royal Bhutan Monastery (RBM), Archaeological Museum Bodhgaya (AMB), Daijokyo Buddhist Temple (DBT), Karma Temple (KMT), Wat Thai Monastery (WTM), Tibetan Namgyal Monastery (TNM), Chinese Temple (CNT), Indosan Nipponji Temple (INT), Burmese Monastery (BRM), Tenjiku Museum (TJM), Mahabodhi Convention Centre (MCC), and Maya Sarovar (MYS).

The distance matrix is calculated in meters for the fifteen locations. In this matrix minimum walking distance from each location to all the other locations are identified using google maps. This distance matrix is used as an input for a python code prepared to find the shortest possible path connecting these locations using Genetic Algorithm. Under this algorithm, the population comprised of different possible combinations of the locations under study, which formed different routes. The locations acted as the genes and the total distance covered on sequentially traversing

the locations as per the route was taken as the attribute defining the fitness of the string. Based on the fitness value, the algorithm ran 117 iterations of crossovers and mutations starting from a population of 36 gene strings to arrive at the shortest possible routes. Ultimately, 3 different routes with similar path distances were produced on running the code. All three of these routes were mapped on GIS to further assess and identify the best possible route choice. The three routes were spatially assessed based on the locations of entries of the compounds, existing characteristics of the streets and overlapping in the routes. From this analysis, the identified shortest path starting from PAR in a sequential order is “PAR- MCC- KMT- DBT- GBS- INT- RBM- TJN- CNT- MBT- TNM- BRM- AMB- MYS- WTM- PAR”. The individual trip distances (in meters) in the same sequence as above are “95 – 400 – 280 – 400 – 600 – 190 – 290 – 600 – 600 – 700 -350 – 130 – 500 – 800 – 50”. The total distance covered in this route is 6.48 kms. The same route is identified on GIS and verified that no overlapping of route is there while walking. Hence, this route is confirmed to be best suitable solution and proposed to be developed in future for tourists.

This study provides a framework to develop optimized travel routes. When talking in the Indian context, most heritage areas follow similar irregular street patterns. As in current practice most of the heritage walks in India are generally linear in nature, due to which it is impossible to cover all the locations/buildings. With the help of the presented methodology in the study, highly optimized routes can be developed. This will help in including the left-out heritage locations within the heritage walk. Hence this methodology can be generalizable in the Indian context in view of the tourist circuit in heritage cities.

06

Spatial Distribution of Child Pedestrian Accidents in the Vicinity of Schools: A case study of Chennai City**Keywords:** Exploratory Spatial data analysis; Point pattern analysis; Hotspot; Children's safety; Walkable StreetsShivani Khurana ¹*(1) School of Planning and Architecture, New Delhi, India*

The Paper discusses about how children's-friendly our streets are. Thirty-one children die in road crashes in India every day. As per the annual report on Road Accident Deaths in India, 2019 (Transport Research wing, 2019) The rapid urbanization of cities has changed the city's land use and street nature. The more vehicles and buildings mean, the fewer open spaces used by children as playgrounds. The streets are one of the essential public spaces degraded over the years. Currently, streets are being managed for vehicles instead of pedestrians and bicycles. This leads to increased pedestrian accidents; children are highly vulnerable in terms of fatal accidents. At the same time, streets have potential issues as a place, not just a space, for children to learn and play and stimulate their creativity, imagination, knowledge, and even their behavior. This study will also examine the relation of child pedestrian accidents with school location and conclude with how street elements can contribute to children-friendly streets.

The meta data set will be collected from the Traffic Department, Office of the Commissioner of Police. A meta dataset will be: (1) each accident is a localized event, known by its Street name, landmark & Area; (2) qualitative and quantitative information describe each accident (day, month, time of occurrence, as well as seriousness of the event, gender, accusing vehicle, victim vehicle, cause of the accident, Fatal accidents, age & gender of a dead person, etc.

Using the data such as (1) Accident road; (2) Landmark; (3) Area. The accident spot's address is generated using the Geo-code tool; the exact accident spot is marked spatially on the map. This approach provides us to determine the location precisely.

This Paper will present the spatial analysis of child pedestrian road accidents in Chennai City, India. The subject is to test the relationship between the spatial distribution of child pedestrian accidents and the school location. The exploratory spatial analysis methods based on Kernel density estimation & clusters will be used to map the accidents distribution and select sites that deserve further investigation. Finally, this analysis will be used to evaluate the influence of the proximity of schools on the localization of child pedestrian road accidents. The study seeks spatial clustering of accidents.

Localizing schools and localizing child pedestrian accidents will lead to identifying spatial clustering of accidents in the neighborhood of schools. The point pattern analysis will be carried out, such as estimation of the intensity of the spatial pattern of events and identifications of clusters.

The researches intends to justify the hypothesis that child pedestrian accidents are significant in closer proximity to schools. A bubble of a 50-meter radius around the school will be made, and each accident will be marked with the nearest school radius to avoid multiple counts. The results will be classified into five categories better to understand the spatial distribution of schools and pedestrian accidents.

The case-specific (child pedestrian accidents in proximity to schools), other pedestrian children accidents, cyclist accidents, pedestrian adult accidents and other accidents will be studied per distance unit from school. The child pedestrian accidents will be quantified using spatial proximity analysis of 100, 200, 300, 500 & 1000m to conclude that the range of accident data declined as the distance from the school increased. The adult pedestrian data was also analyzed similarly to understand the relationship between child accidents.

The research will be concluded with the observation that child pedestrian accidents do not randomly happen across the city. Still, there is a significant relationship between these accidents and the spatial distributions of schools in the town. The spatial decrease of child pedestrians' accidental data will be recorded. To understand the spatial pattern of child pedestrian accidents from the point of school. The hypothesis was then that this distance could correspond to the mean radius around the school. The analysis results will be more on a computational basis rather than initial presumptions.



SMUS23_07-02

Application of Quantitative Techniques in Spatial Analysis

Session Organisers:

Shubhajit Sadhukhan

Associate Professor, Indian Institute of Technology Roorkee

Dimitri Prandner

University of Salzburg

Wolfgang Aschauer

Associate Professor, University of Salzburg

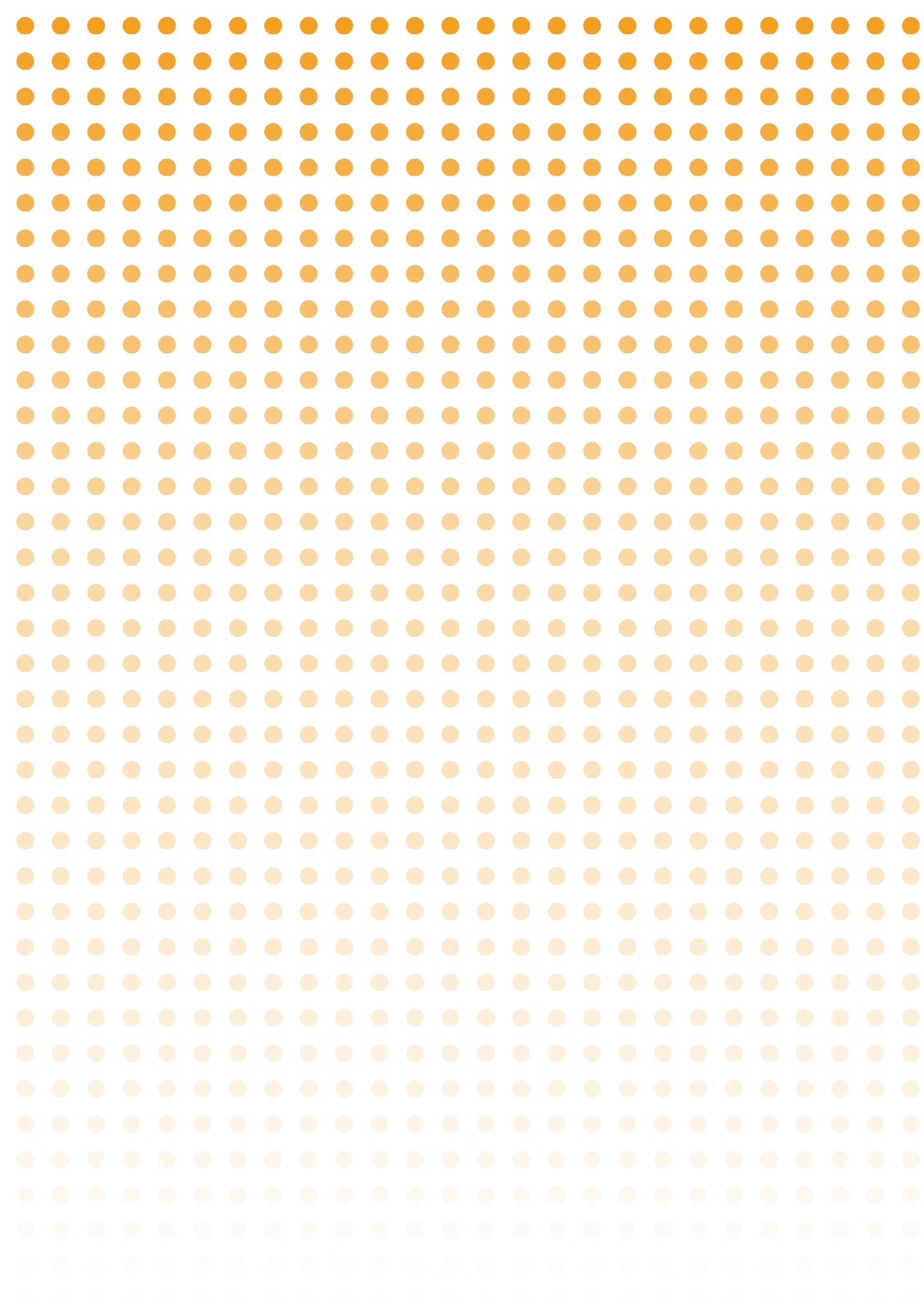
Martin Weichbold

University of Salzburg

Alexander Seymer

University of Salzburg





01

Urban Morphology and Sustainability of Urban Villages- Case Study of Sohana, Mohali

Keywords: Morphology; Sustainability; Urban Village

Vimal Preet ¹, Toolika Mishra ¹, Dipanwita Panda ¹

(1) Chandigarh University, Mohali, India

Sahibzada Ajit Singh Nagar, commonly known as Mohali, is part of the Chandigarh Tricity area and a direct extension of the Chandigarh city grid. Since its inception in 1975, it has witnessed rapid expansion over the last two decades. During this ongoing process of development, the pre-existing villages were spatially engulfed during the creation of the master plan of the city of Mohali. Most of these villages were able to retain their primary character within their periphery. However, due to the peripheral rapid development in the past 10 years, the villages have experienced rapid changes in spatial characteristics as well as densification. Sohana, was the largest village in the district of Ropar, before the formulation of Mohali. In the year 2011, the urban village of Sohana was recognized as a statutory town. In 2012 the Village became the part of Mohali Municipal Corporation. The Urban village at present is in the “Dynamic stage” of development as the peripheral development is impacting its inherent rural characteristics. There has been a drastic change in the livelihood of the natives and subsequent socio, cultural and economic change in the Village. In the initial study, it was found that the spatial pattern has altered in response to the dynamics of the changing society living in the area. The dynamics of this village have been measured based on the data collected by the various on-ground studies. These factors create a skeletal framework to diffuse the statistical data and derive a conclusion.

Urban Morphology investigates various changes in the spatial pattern of the Urban Village. The correlation of the on-ground survey with the morphological study helps in understanding the urban fabric and its growth pattern of the village.

While studying the historical urban pattern, the link between urban morphology and sustainability could be observed. While exploring the spatial patterns of the village we performed a household survey with a sample size of 150 households, dividing the entire village into 11 pockets. This survey helped us understand the urbanization of the Village owing to the external factors of developing city as well as growth of the inner part of the village. While taking up the settlement study on the basis of our observation and household survey, we can derive a fact that how the ecological condition of the village has been influenced by the growing urbanization and changing spatial pattern of the village. Taking up a few necessary points such as Population, which was projected to be around 15,000 approximately according the local data. The exact count of population is yet to be declared due to the gap in the census data collected. Considering the population to be 15,000 the study of typology was also carried out through household surveys and observational tours of the village. By the following methods, we got to know, about 35% of the houses were rental-based. The above-mentioned data has helped in getting the type of population in the village. While performing the household survey we inferred that the degradation in the ecological condition of the village is because of the floating population and the migrants. The people have changed their typology of accommodation from private to rental accommodation, which has affected most of the facilities of the village. The ponds which are present in the village had a major contribution to the ecological sustainability of the village. In the period of 16 years, from the year 2002 to 2018, out

of the 3 ponds, one pond got totally filled and a parking space was created for the villagers, and the other two ponds, have got encroached by a percentage of 50% and 30% respectively. This illegal occupancy has led to hampering of the natural catchment area around the ponds leading to issues like waterlogging even around the areas of ponds. The unchecked human activities have choked water bodies in the village and disturbed the natural balance in ecology which in turn has affect the urban character and morphology in the village.

Spatial patterns and sustainability are the two interlinked terms that have been showcasing major developments which have taken place in the village in these many years. Having interaction with the inhabitants who are the natives as well as the ones who have settled recently, has given us a glimpse of their issues and expectations. The water bodies present in the village, have experienced most change, giving a separate space for community parking and Dharamshala of Sohana. The green pockets which were used as recreational spaces have been built on over the years resulting into lack of open spaces for gathering, recreation as well as parking. Even at present people wish to have the ponds filled for building recreational spaces as well as community spaces. But, in terms of sustainability, the rejuvenation of the existing waterscape is what matters and should be the peak of concern. As mentioned earlier, the aspect of urban development which has taken a toll on the village, in terms of lagging infrastructural facilities such as water shortage as well as water logging in rainy season. There can be interventions on the village level in and around the Pond areas, which can help in fighting the infrastructural issues. All these measures have helped in getting the configurational analysis of the village through the methodology of research. In the whole process, addressing the Local leaders, and discussing the scope of development infrastructurally as well as the ecological aspects, which are already in a very adverse condition due to the unexpected state of the village. Considering the gaps created over the decade, understanding the area networks, and working on the dark zones facilitating the issues. As a result of the research, we developed holistic picture of the urban village and were able to identify the issues of the society and propose services and infrastructure in their favor.

02

**Assessment of Disparity in Infrastructure Distribution in a Region Using Spatial Analysis:
A Case of Mumbai Suburban Rail Network**

Keywords: Infrastructure Disparity; Spatial Analysis; Suburban Rail Network

Aditya Manish Pitale ¹, Manan Monga ¹, Shubahjit Sadhukhan ¹

(1) Indian Institute of Technology Roorkee, India

The Indian cities, occupying only 3% of the total landmass, are responsible for generating 60% of the country's total GDP [1]. These urban centres provide a high standard of living and numerous employment opportunities, which attracts a large population of migrants towards them. With the handling capacity of the infrastructure being limited, the influx of migrants forces a horizontal urban sprawl near the metropolitan centre. It is observed that such sprawl gradually spreads beyond the metropolitan boundaries and merges with the adjacent cities or towns, resulting in the formation of larger metropolitan regions. However, the city still remains the major activity centre. The primacy of the metropolitan city kerbs the development of industrial activities in its region due to which the role of regional centres gets limited to dormitories or sleeping quarters [2].

With the expanse of the region growing beyond the city's boundaries, the distances between different activity zones also increase. This makes transport connectivity within the region an important factor in ensuring adequate functioning of the metropolitan region. The areas within the region which are deprived of a proper connectivity with the metropolitan centre and with the other areas within the region result in being left behind in terms of economic development. Hence, it becomes important to identify the disparity in the distribution of transportation infrastructure and services in the metropolitan region. By examining the existing transport network in the region, the locations with inadequate connectivity can be identified and suitable measures can be proposed to provide equitable development opportunities to such areas by improving the transport connectivity. Analyzing the infrastructural distribution in the region spatially can make it easy to identify the problem areas and devise appropriate solutions. Spatial analysis highlights the gaps and assists in identifying the disparity between different areas that can be left unnoticed by quantitative analysis alone. This makes it an important tool in the studies aiming at understanding the spatial distribution of infrastructure facilities.

In this study, the existing suburban rail network in the Mumbai Metropolitan Region (MMR) was assessed to determine the disparity in connectivity of different regional centres with the metropolitan city, if any. For this, all the stations of the suburban rail network of Mumbai were spatially located to assess the distribution of public transport infrastructure within the region. The infrastructure availability in different areas within MMR was determined by calculating the number of suburban railway stations falling in each of the fourteen sub-districts in MMR. The number of stations alone, however, does not depict the complete picture in terms of service delivery. The adequacy of service depends on the number of people served by the concerned infrastructure. Hence, the calculated number of stations in each sub-district was further compared with the population distribution within the region to assess the disparity between infrastructure provided per hundred-thousand population in different parts of MMR. The number of stations in each sub-district was divided by the population (in hundred-thousands) of that sub-district and this ratio was used to measure the infrastructure availability per capita. Spatial mapping of these values provided an insight into the disparity between public transportation infrastructure in MMR.

From the study, it was found that two of the sub-districts in MMR (Alibag and Uran) had no access to the suburban rail network of the region. Thus, these two sub-districts were omitted from the further analysis. Based on the quantitative analysis, the remaining sub-districts listed in the increasing order of the station to population ratio are Bhiwandi, Mumbai City, Thane, Ambernath, Kalyan, Vasai, Ulhasnagar, Mumbai Suburban, Panvel, Pen, Khalapur, and Karjat. After spatially mapping the ratio, it was observed that south-eastern part of the MMR consisting of Karjat (4.08), Khalapur (3.26), Pen (1.74) and Panvel (1.36) has a higher number of stations available per hundred-thousand population as compared to the rest. It can also be observed from the results that Mumbai city sub-district has the second least value of station to population ratio (0.29) after Bhiwandi (0.17). This highlights a huge deficit in the infrastructure availability against the population in Mumbai city when compared to the other sub-districts. When seen in absolute terms, Mumbai city has the highest number of suburban rail stations (27) among all the sub-districts of MMR. The remaining sub-districts have a relatively smaller number of suburban rail stations with two stations in Pen and Bhiwandi each, three in Ulhasnagar and Ambernath, five in Khalapur, six in Karjat, seven in Vasai, eight in Kalyan, nine in Panvel, eighteen in Thane and twenty-five in Mumbai suburban. However, the population of Mumbai city largely exceeds the population of other sub-districts. Hence, the high number of stations in Mumbai city is also unable to match the station availability per hundred-thousand population in most other sub-districts of MMR. On the other hand, Mumbai suburban, the nearest sub-district to Mumbai city has relatively higher number of stations serving per hundred-thousand population. It can be inferred from the results that there exists a high disparity between public transport infrastructure availability with respect to population in different sub-districts of MMR.

The results obtained from this study portray the ground reality of Mumbai, where all the activities concentrate in the city. Despite having a large number of stations in the city, the Mumbai local trains are mostly overcrowded due to the concentration of population in the city area. On the contrary, sub-districts like Karjat and Khalapur, which have six and five stations respectively, do not observe overcrowding in the local trains. This can be majorly attributed to a high disparity in population distribution between the central and fringe areas of the metropolitan region.

This study showcases how spatial analysis can assist in understanding the disparity in the distribution of infrastructure facilities within a particular region. Such approaches can be applied to assess the distribution of different facilities related to health, security, and other emergency services as well. With the insights provided by spatial analysis, the decision-making authorities can easily identify the specific locations needing special attention and focused intervention. On the other hand, such analyses can also help in identifying possible overkill. With the variations in service and infrastructure availability highlighted by the spatial analysis technique, a logical assessment of the actual requirements and its comparison with the available infrastructure can be made to determine if there is a deficit or a surplus in any area. The decision-makers can consequently optimize the infrastructure and service distribution and ensure the most efficient use of available resources.

03

Social Inequality in Household Air Pollution Exposure. A Nationwide Assessment in India

Keywords: Environmental Inequality; India; Minorities; Air Pollution

Ingmar Ehler ¹

(1) *TU Kaiserslautern, Germany*

Air pollution in India has steadily increased in recent decades, and has reached such high levels, especially across the Indo-Gangetic Plain, that it is now receiving more and more attention, both in scientific discourse and among the general public. One aspect that has been studied mainly for individual large cities is the social distribution of this pollution. Currently, there is only one study by Chakraborty and Basu (2021) which also examines environmental inequality for all of India, based on survey data from the 2011 Census aggregated to the district level, and a model of fine particulate matter (PM_{2.5}) distribution. I take a similar, but enhanced approach, basing my analyses on nationwide individual survey data at the household level from the National Family Health Surveys NFHS-4 and -5 (2015-16 and 2019-21), which I link to an improved updated version of the model of annual average PM_{2.5} pollution, provided by the Atmospheric Composition Analysis Group (ACAG, Washington University in St. Louis; Van Donkelaar et al. 2021), and data from SMOG 2015 (Sadavarte and Venkataraman 2014; Pandey et al. 2014), an India-wide bottom-up registry of local emissions of various air pollutants, categorized by the sector in which they were produced. This allows me to explore how wealth, education, and membership in marginalized groups are associated with residential exposure to air pollutants in India on the household level. Minorities I consider are the state-recognized ones of Scheduled Castes, Scheduled Tribes, and Other Backward Classes, and additionally I will use an indicator for local religious minorities. Some of these minorities are very unevenly distributed between heavily and lightly industrialized areas. In addition, there are also strong differences in air pollution levels between different areas for meteorological reasons. Therefore, it is necessary to consider fixed effects for different spatial units – districts, states, and larger climatically homogeneous regions of India.

Although point coordinates for the households are available in the last two waves of the NFHS, the average values within a radius of 5 km around these points must be used for the spatially attached air pollution data, since some of the household location points were shifted by up to 5 km for the purpose of anonymization. Even so, analyzing the data at the household level allows for a much more detailed examination of the distribution of air pollution than at the district level.

At the district level, Chakraborty and Basu (2021) find higher annual average PM_{2.5} concentrations in 2011, in districts with higher proportions of low-caste members, young children, households in poor structural condition, and without toilets. Preliminary analyses using 2015-16 NFHS-4 with ACAG PM_{2.5} data show that the difference between districts for proportions of Scheduled Castes also exists during this period, but India-wide no significantly different exposure at the household level is found between households whose head belongs to a Scheduled Caste and other households. However, looking at district fixed effects, I find that Scheduled Caste households are somewhat more exposed to PM_{2.5} within districts. Almost the same correlations are shown for Other Backward Classes: no significant difference on the country level, and slightly more pollution within districts. Unlike in the analyses of Chakraborty and Basu (2021), the weak negative effect for districts with higher proportions of Scheduled Tribes is significant, i.e., they are slightly less

polluted. Yet the burden on Scheduled Tribes is still much lower at the household level, both India-wide and within districts. It appears that segregation works in favor of this group in this regard, as they tend to live in less industrialized, economically underdeveloped parts of the country.

In order to access inequality by SES, up to now I have used on the one hand a precomputed wealth index from the NFHS data, based on several assessments of household possessions and building materials, and on the other hand the highest education level of the household head (below primary, primary, secondary or tertiary). The wealth index is based on a principal component analysis over all appropriate variables in the data, and doesn't seem to be very distinctive for higher levels of wealth. After discussing this issue with colleagues who are more experienced in accessing information on wealth in developing countries, I plan to build a custom, more appropriate and contend-based index with the raw data of the NFHS for further analyses.

Both SES indicators I am using for now show a u-shaped relationship with PM2.5 exposure when comparing households across India, so both households with lowest and highest wealth and education are exposed to more pollution. Comparing only within districts, there is no relation of pollution and education, and a linear positive relation of pollution and wealth, meaning that contrary to expectations, the higher the wealth index score the higher the PM2.5 pollution at the place of residence.

In further analyses, pending but to be completed in due course, I will use larger spatial units for comparisons and conduct separate analyses for individual regions, particularly the Indo-Gangetic Plain, using a classification from David et al. (2018) based on meteorology and variation in aerosols. I will also inspect the SMOG 2015 data to determine the relative impacts of different sectors on unequal pollutant loads, and update my analyses also looking at trends with the newly available NFHS-5 data.

In summary, this is the first study to look at inequality in air pollution at the household level for the whole country of India. I find that Scheduled Caste households are exposed to somewhat more pollution than the general population, Scheduled Tribe households are exposed to significantly less pollution, and both household wealth and education show a u-shaped relationship with pollution. To make this overall view of the situation in India more insightful, I will make regional refinements to my analyses.

04

Climate Risk Assessment and Mapping of Indian Himalayan Region: An Application of IPCC 2014 Framework of Climate Risk And Geospatial Analysis

Keywords: Climate Risk; Indian Himalayan Region; Vulnerability; Adaptation; Geospatial Analysis

Aarifah Jan ¹, Shyamasree Dasgupta ¹

(1) Indian Institute of Technology Mandi, India

Climate change is the most complex socio-economic and environmental challenge facing the world. It is augmenting the existing climate risks and creating new risks for the natural and socio-economic systems (IPCC 2014). However, there exists a Spatio-temporal differentiation in the impacts of climate change. Countries in Global South are the poorest countries, have a relatively low carbon footprint, and are more vulnerable to climate change and occurrences of extreme events (Global Climate Risk Index 2021). The disproportional burden of climate impacts augments the already existing socio-economic inequalities, undermines livelihood opportunities, and poverty reduction, and affects food, water, and energy security.

India is ranked 7th out of 180 countries in the global risk index 2019 (Eckstein, et al., 2021), is a multi-hazard-prone country, with widespread exposure, due to high population density, and high dependence on livelihoods on natural resources. It holds in context to the IHR. In the past decades, the IHR has suffered unprecedented damages due to the increased occurrence of extreme weather and natural disaster events and is a fragile mountainous region, because of its complex geographic, climatic, and geological composition (Shukla et al., 2015; Romshoo et al., 2018; Romshoo et al., 2015; Wester et al., 2019).

The climate risk assessment and methodological literature is limited in IHR. Identifying disaster risk reduction practices and designing appropriate adaptation measures is a high priority in IHR at the local level. The methodology for estimation of the Global Climate risk index has limited applicability and policy relevance when it comes to the Himalayan region, as it does not capture key biophysical, socioeconomic, and institutional aspects as well as all the components of climate risk and its spatial-temporal differentiation (that too at the local-level). Therefore, there is an urgent need to come up with a common framework for climate risk assessment based on accurate scientific understanding. The framework and its associated index/mapping are beneficial for the policymakers working at the granular level for the optimal allocation of scarce adaptation funds, and disaster risk reduction. It has also the potential to deliver the key developmental co-benefits if the drivers of climate risk are taken into consideration in mainstream adaptation planning.

The present study aims to develop a climate risk index for Indian Himalayas and assess the geospatial pattern of the estimated risk index. The specific objectives are as follows:

- Carrying out a climate risk assessment (preferably district-level) in the Indian Himalayan Region (IHR) based on employing an indicator-based approach that integrates Hazard, Exposure, and Vulnerability as the cofactors of climate risk as proposed by the modified risk assessment framework proposed by IPCC 2014.
- To identify the hotspots of climate risk in IHR, using the techniques of geospatial analysis (measures of spatial autocorrelation, advanced spatio-temporal techniques). Geospatial analysis is carried out to test whether the district-level climate risk index exhibit any spatial pattern across districts in the study region. Techniques of spatial autocorrelation have been

used to test the existence of any specific spatial pattern against the hypothesis of spatial randomness. The hotspots refer to the spatial clustering of high-high-risk districts.

In the Fifth Assessment Report of IPCC (2014) [AR5-IPCC 2014], Climate risk is an interaction of Hazard, Exposure, and Vulnerability. Hazard is the potential occurrence of a physical or natural event that may cause loss of life, livelihood, or property. Exposure is the presence of an ecosystem that could be adversely affected. Hazard is the “potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provisions, ecosystems, and environmental resources”. ‘Exposure’, on the other hand, is defined as “the presence of people, livelihood, ecosystems, environmental functions, services and resources, infrastructure, cultural assets in places and settings that could be adversely affected”. The third component ‘vulnerability’ is conceptualized as an internal property of a system: “the propensity or predisposition to be adversely affected”. Putting it in different words, the term vulnerability can be defined as the degree to which a system cannot cope with the impacts of climate change and its variability, encompassing several biophysical, socioeconomic, and institutional aspects. The framework integrates the common set of indicators considered under Hazard, Exposure, and Vulnerability in the Himalayan context. The framework is relevant from the disaster-risk reduction perspective, effective adaptation planning, sustainable management of the mountain ecosystem, and communities inhabiting in IHR.

The research is relevant to the spatio-temporal specificities of the Indian Himalayan context and adaptation planning in it. Climate risk assessment (CRA) is a prerequisite for effective Climate risk management in the global south as it has the potential to identify the context and hazard-specific impacts and their magnitude. The assessment would be profoundly essential for the policy-makers for the effective adaptation interventions in this region. Identifying the local-level climate risk indices would help policymakers to prioritize the regions, and lead to the sustainable development of the communities. It would provide invaluable insights and assess the economic viability of the approaches such as climate-smart agriculture, community-based, and ecosystem-based adaptation, and stimulate disaster risk reduction approaches.

05

Investigating the Impact of Urban Heat Island on Surat

Keywords: Urban Heat Island; Land Surface Temperature; Surat, Landsat; NDVI

Atma Deep Dutta ¹

(1) Centre for Environmental Planning and Technology (CEPT) University, Ahmedabad, India

When temperatures in urban areas are higher than those in the surrounding areas, this phenomenon is known as an urban heat island (UHI). The UHI effect has come to light as a potential risk for nations that are rapidly urbanising, like India. It has a negative impact on energy consumption, public health, the economy, and contributes to climate change. UHI is primarily caused by rapid urbanisation, economic development, and climate change. Climate, population density, anthropogenic activity and the green canopy, land use, and urban morphology all influence UHI intensity. It calls for comprehensive city-specific studies to develop appropriate mitigation strategies. Measures to mitigate UHI impacts at the ward level should be included in city heat action plans. The country must develop high resolution UHI monitoring and forecasting capabilities to accomplish this. UHI mitigation and adaptation entails urban planning, green building codes, energy consumption, and air pollution, and would necessitate a national plan for harmonising UHI-related measures implemented by central ministries, state governments, and municipal corporations.

Surat, a coastal and riverine city is in the Western state of Gujarat. It is the eighth most populous city in India and the second largest city in Gujarat in terms of both area and population. It is India's fourth fastest growing city with a decadal growth rate of 55%. The city has one of the highest migrant shares with 70% of the population growth attributed to migration. Surat Municipal Corporation (SMC) is the city's administrative body. The city has an area is 326 km², and its population is 44,26,826 (according to 2011 census). Surat has a tropical climate and is 13 metres above mean sea level. It receives 2500 mm of rain annually.

We are making a case for the mapping of urban heat islands. Maps of Land Surface Temperature (LST) were created to pinpoint the city's heat hotspots. Many different scientific studies on regional and global climate change, use land surface temperature (LST) as a key parameter. Open-Source satellite data with a spatial resolution of 30 metres is available from LANDSAT 8 and LANDSAT 9 satellites. 11 spectral bands, including two thermal bands, are present in the data captured by Landsat 8 and Landsat 9. LANDSAT 8 and LANDSAT 9 satellite imagery with higher spatial resolution was obtained. The thermal bands, band 10 and band 11, are mostly used for LST retrieval; however, band 11 has been found to have more uncertainty than band 10. As a result, LST was retrieved using Landsat 8 and Landsat 9 band 10 data. For the months of March, April, May, and June, satellite imageries of Surat were downloaded from the US Geological Survey's Earth Explorer portal (USGS). Sensors measure energy, which is converted to Digital Numbers (DN), which are then transmitted as satellite data to users. After inputting Band 10, the Top of the Atmosphere Spectral Radiance is calculated. The TIRS band data should be converted from spectral radiance to brightness temperature (BT) using the thermal constants from the metadata file after converting the digital numbers (DNs) to reflection. By adding absolute zero, the radiant temperature is modified to produce the results in Celsius.

One of the variables that can be used to calculate the impact of an urban heat island is the land

surface temperature. In Surat, the Land Surface Temperature (LST) is steadily rising. Land Surface Temperature has increased due to an increase in population and population density, a decrease in open space and green cover, and an increase in built-up areas. The urban area of Surat has increased by over 50 square kilometres. Surat is experiencing hotter winter months and there is a persistent imbalance in seasonal cycles. The most probable reason for this phenomenon is the decrease in volume of water in River Tapi and conversion of large proportion of vegetated land into built up area. The central region of the city has the highest LST, followed by the north-western and southwestern regions. The heavily urbanised city centre illustrates the relationship between LST and urban growth. Apart from these, some peaks of LST are also being found in agricultural fallow land.

Between LST-NDVI and LST-NDWI, a significant inverse relationship has been discovered. Landsat's visible and near-infrared bands were used to calculate the Normalized Difference Vegetation Index (NDVI). Because the amount of vegetation is an important factor and because the NDVI can be used to infer general vegetation condition, it is important to estimate the NDVI. The NDVI calculation is crucial because it must be followed by calculations for the proportion of vegetation (P_v), which is closely related to the NDVI, and emissivity (ϵ), which is related to the proportion of vegetation (P_v).

We have estimated the LST for the years 2013 to 2022 for the study area for the months of March, April, May, and June. We have studied the increase in Land Surface Temperature during the summer months for the above years. Depending on the highest temperature achieved every year, we have come up with a threshold temperature value to identify the areas affected by the Urban Heat Island effect. The results of LST have also been correlated with NDVI, NDWI and NDBI and the relation between Land Surface Temperature and vegetation, built-up and water index have been studied. The results showed that there has been a continuous increase of Land Surface Temperature during the summer months in the last few years. Land Surface Temperature is directly related to NDBI but inversely related to NDVI and NDWI.

Moreover, the slum dwellers of the city have been identified as the vulnerable population to the Urban Heat Island effect. Few slums have been identified depending on the higher values of Land Surface Temperature and the socio-economic conditions of these slum dwellers have been studied. Results have shown that the Urban Heat Island effect has led to unliveable social conditions and a difficult economic situation. The findings of these studies, along with the areas that have been identified as experiencing UHI effects and the declining socioeconomic conditions of slum dwellers—who were chosen for this study as a vulnerable population—will further assist planners and city authorities in creating an efficient heat action plan for the city.

06

Optimal Route Design and Adaptive Route Allocation in Malawi Cities: A Case Study of Lilongwe City

Keywords: Urbanization; Congestion; Route optimization; Modified Dijkstra's Algorithm

Elias Peter Mwakilama ¹

(1) University of Malawi, School of Natural & Applied Sciences, Malawi

Urban population in Malawi accounts for at least 15.3 % of the total population with the current rate of urbanization estimated at over 4.2 % in the World. Such high reported figures put pressure on the city authorities to provide efficient public service solutions. Specifically, fast urbanization, high population density, and rapid growth of vehicle population have put stress on the existing urban transportation system in Lilongwe with more experiences of traffic congestion, high vehicle operating costs, and an increase in delay and travel times. From an operational research (OR) point of view, this current situation in the city creates a demand for efficient routing algorithms to solve the aforementioned challenges using a model popularly known as the vehicle routing problem (VRP). Addressed as a VRP, the problem of optimizing connection or allocations in transportation networks is popular in many different scenarios, such as car journeys, public transportation, and logistics. However, little attention has been paid to such studies in Malawi more especially at planning and designing of new urban route connections. By utilizing a combination of Geography Information System (GIS) and an adaptable route optimization algorithm, this study proposes a methodology for optimizing route design and allocation of road segments in Lilongwe City under traffic congestion conditions. Road network data is prepared through a computer based tracking method (CBTM) in ArcGIS 10.0 and fed into a modified Dijkstra's algorithm written in Java NetBeans IDE 8.0. Shortest routes that are congestion and vehicle operation costs abating are generated and proposed for the road users. By reducing both travel distance and time with 2 – 41 % and 2 – 59 % savings, respectively, simulation results validates the effectiveness of the proposed method in the urban sustainability context.



SMUS23_08-01

Ethnography as Spatial-Temporal Method in the (Re)production of Public Space

Session Organisers:

Jenia Mukherjee

Assistant Professor, Indian Institute of Technology Kharagpur

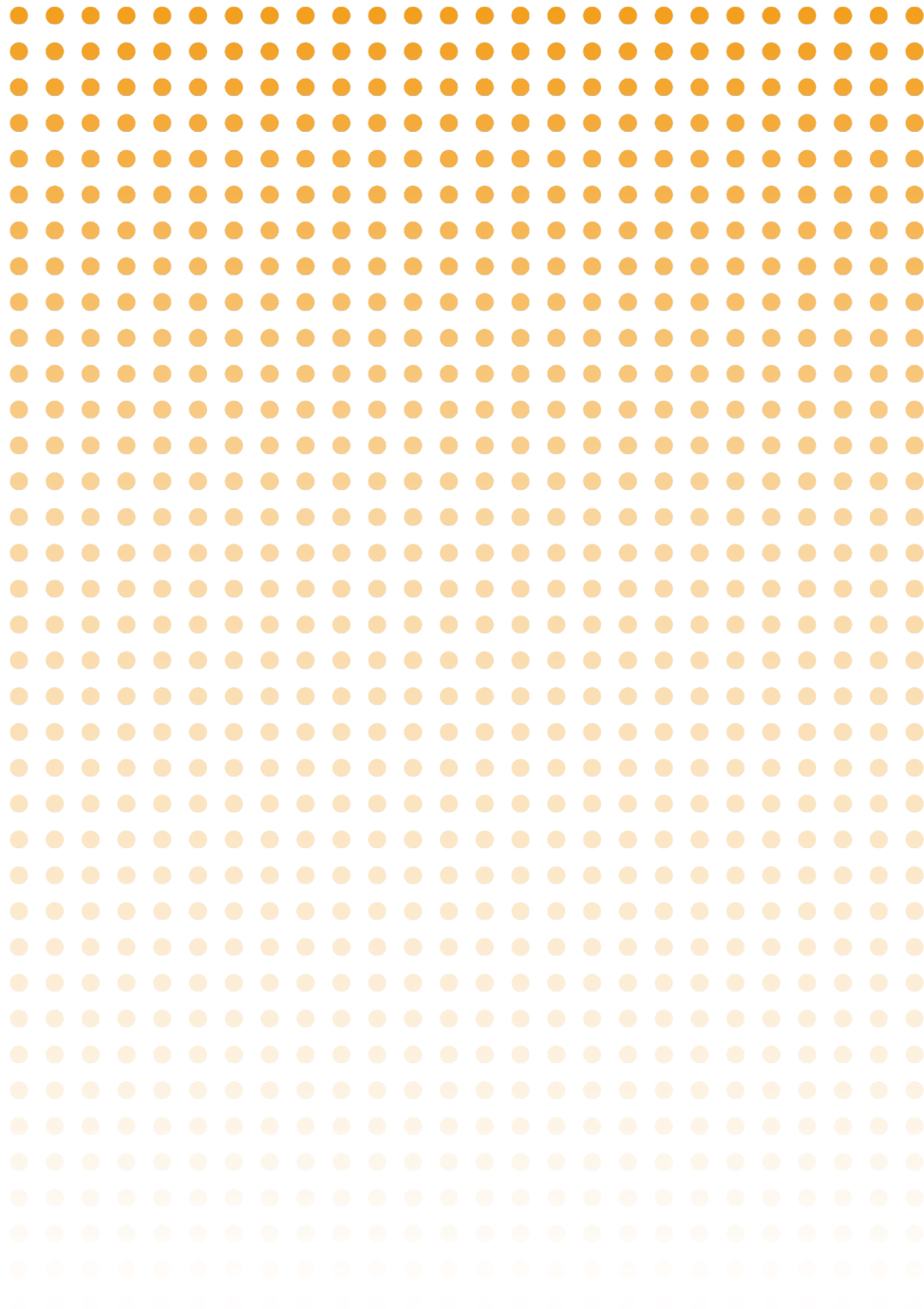
Fraya Frehse

Professor, Universidade de São Paulo

Jakkrit Sangkhamanee

Associate Professor, Chulalongkorn University





01

Making Publicness Visible, Walking Tours, a Vernacular Practice of Ethnography**Keywords:** Walkability; Publicness; Thick Comparison; Practice Theory; EthnographyShruti Malik ¹*(1) Catholic University Eichstaett Ingolstadt, Germany*

Urban walking has been positioned as an aesthetic practice, as a subject of research and both a critical tool of inquiry in different fields of study since the 20th century. While walking (in the street) is a means of urban cultural production and reproduction, it is also a fundamental form of embodied sense making and knowledge production in the world. Urban walking therefore becomes both a practice of place and sensemaking. In the paper, through a practice theory perspective, I attempt to show and then compare how the epistemology and the methodology of the practice of guided walking tours are a practice of vernacular practice of ethnography. By looking at urban ethnography through the lens of guided walking tours as a methodology, I attempt to reflexively understand the production and notion of public and publicness on the streets and expand on the discourse on the epistemology of the guided walking tours and urban ethnography. Within the paper I argue that the practice of Guided walking tours is a vernacular practice of ethnography. Using thick comparison and using guided walking tours as a lens I attempt to critically analyse the methodology and epistemology of urban ethnography by seeing differences and similarities amongst the methodology and epistemology between guided walking tours and urban ethnography and how they inform and produce publicness. This is achieved through doing participant observation of guided walking tours in the cities of Berlin and New Delhi. There reflexive ethnography is used as a method to analyse urban ethnography as an object through the concept of thick comparison. Guided walking tours are peculiar forms of everyday urban walking. They have an intentional and designed performative nature which is accomplished through engagement of a 'guide' and 'participants'. The narrative structure of the guided walking tour connects different touristic sites, heritage sites, urban villages and sites of memorials together. However, these narrative structures that are created or designed are heavily dependent on the agency (social, symbol, political, cultural) of the place and are often if not explicitly then symbolically anchored in the materiality of the urban structures (for example architecture or urban art and or way finding systems.) The anchoring is also sometimes implicit which is made explicit through the storytelling about the places. Thus, walking tours depend and play heavily on the in-situ-ness of the format. These walking tours form a thick yet temporal fabric of the urban places that it visits, practices and therefore creates. Parallelly, ethnography as a study is a practice of in-situ participation and observation. The epistemology focuses on the notion of empirical data which is observed during the everyday practices. These practices are made intelligible and visible, or made explicit through the practice of writing.

02

Ethnography as A Method of Research on Urban Public Space: Challenges and Possibilities**Keywords:** Ethnography; Urban lakes; Public space; theNon-human; PraxiographyAkash Jash ¹*(1) Institute for Social and Economic Change, India*

Studying urban (public) space in the cities of a developing country, dealing with their ever-transitory nature, and the coexistence of different temporalities there in the broader process of urbanization has always posed new methodological challenges for the researchers. The uniqueness in the evolution of public space in the developing countries is the coexistence of different temporalities. To say in simple terms, social communities with social practices from different times coexist in immediately contiguous social spaces. There is no uniformly modern public space in the cities of developing countries. The traditional practices or architectures, the modern time, and the postmodern sensibilities populate the same urban space. They coexist adjacently, jostling with each other in constructing urban public spaces. This is the distinctness of a developing country urban space, the chief characteristic of which is discontinuity and disjuncture (Hosagrahar, 2005). We live at the same time with different temporalities, or with practices representing or hailing their provenance from different times. Study of public spaces in urban sphere, therefore, demands methodological creativity and innovation to deal with its uniqueness. Since the research on urban generally deals with the questions of governance and institutions, sometimes focus on the micro scale politics and policies over urban issues, an “ethnographic turn”, to read the urban questions and crises, can be effective methodological intervention. An “ethnographic turn”, particularly on urban spatial question, has the potential to record the everyday practices over the space and to develop a grounded perspective on the local dynamics of change of that space. Scholars have argued that “to capture the complex and often convoluted and contradictory processes through which spaces and subjects are co-produced...in-depth grounded ethnographic lines of inquiry are highly generative methodological approaches” (Gururani and Kennedy, 2021). Following this line of argument, while I have adopted urban ethnography as the proposed method for my doctoral research, in this abstract or my proposed article, I am taking the attempt to problematize the conventional practice of ethnography in the study of urban space in the developing countries, and simultaneously will try to overcome the limitations theoretically and through my own fieldwork.

03

Spatializing Ethnographic Study to Understand Socio-Spatial Relations in a Contested Public Space; Chaharrahe ValiAsr in Tehran

Keywords: Spatial Ethnography; Public Space; production of space; Everyday practices

Maryam Saedi ¹

(1) Faculty of Urban Planning, School of Fine Arts, University of Tehran, Iran

I will start my presentation with a brief explanation of the theoretical insight that involves approaching “space” as a product of the socio-material practices of the various actors. Indeed, I consider space as a socially constructed phenomenon, which is closely related to the approach of Session 9. I will then go on to discuss the field that I will be studying. I will explain the characteristics of the field that make it a contested public space. Then I will state the research problem and the methodology I have chosen to address it. After that, I will mention the relevance of my research and the main concern of session 9 in terms of subject and methodology. For more than half a century, urban research has no longer asked the question “What is space?” and defined space as an abstract idea, but has tried to answer the question “which/how different human and non-human actors form a space” (Lefebvre, 1991). In this approach, space is no longer a neutral container for social relations, but is constantly produced and reproduced through top-down planned interventions and bottom-up everyday practices. Everyday practices are based on spontaneous motives that result in urban spaces being changed by people according to their desires and taking on different meanings. This means that, in contrast to the formal forms of (re)production of space, different social groups occupy, change, appropriate, and even abandon space in different ways. In this presentation, I will discuss the relationship and mutual effect of these two ways of producing space in a public space in Tehran, called Chaharrahe ValiAsr, translated as ValiAsr intersection. It is the intersection of two major streets-ValiAsr Street and Enghelab Street-in the center of Tehran. Moreover, Chaharrahe ValiAsr is the location of two of the most widely used public transportation, the metro and the BRT, and it attracts many people every day. So, it can be said that it is significant in terms of its location in the city and as a transportation hub. In addition, Chaharrahe ValiAsr can be considered a contested public space. By contested, I mean that there are many forces and social groups that consider this public space as their own and form it in their own way.

04

Introducing Equity in Public Spaces

Keywords: Physiological Aspect of Design; Improve Perception; Empathetic Observations of Needs; Social Inclusion and Accessibility Architecture Planning and Design

Anjali S. Patil ¹

(1) Madhav Institute of Technology and Science (MITS), Gwalior, India

The main aim of this study was to understand the reasons and solutions which make any public space accessible and inclusive to all categories of people. This can be achieved by exploring the physiological aspect of design that includes or excludes any user group from using a space; by identifying the needs and understanding the demands of people that use the space through extensive research, people survey and empathetic observations of the place and also by finding methods to improve perception of people towards spaces through design. To achieve these aims and objectives a descriptive survey of the spaces and user group was conducted, and the perception of non-user was also taken under consideration. This helped in understanding the reasoning and psychology behind a person using or not using a space. It also helped in identifying the factors that make people feel socially disconnected from a space and the factors that include or exclude certain strata of society. Although design should be accessible in all walks of life, the focal point of this study was the architectural design and planning of public spaces as they are the hotspots for handling large number of gatherings and thus require well thought of design considerations. A recent example can be put forth of the Covid-19 outbreak, where a well designed facility would have helped loads in the quarantine and containment of the virus. Also, the study of public spaces rather than any intimate private space was opted for since public spaces involve several visual, auditory and physical efforts, in high capacity. Since the study of the use and design of public spaces in general is a vast subject, given the time constraints, we took to studying about accessibility and social inclusion through an example of interstate bus terminals as a prime sample of public space under the lens of accessibility and social inclusion, for managing large crowds.

05

Analysing the Potential of an Urban Recreational Public Space to Function as a Third Place: Case Study of Dighalipukhuri Precinct, Guwahati, Assam, India**Keywords:** Public Space; Outdoor Recreation; Third Place; Perceptual Qualities; Sense of BelongingBarnali Chakraborty ¹*(1) Indian Institute of Technology, Kharagpur, India*

Cities are like living organisms (Batty & Marshall, 2009). They reflect the lives of their inhabitants, their actions and interaction with each other as well as with their environment. Cities impart a profound impact on the lives of their inhabitants and help shape their values and beliefs. The physical features of a city like its architecture, spatial layout, landscape elements etc. and the social features like community engagement, social interaction and activities etc. provide a canvas for the city dwellers to paint a story that is a true representation of themselves and their communities. Similarly, the dreams and aspirations of the inhabitants help shape the urban landscape and influence human behaviour and activity patterns (Tigran, 2020). However, due to the recent urbanization pressure and the accompanying unprecedented changes, this connection between the city's physical features and individual's social attributes is weakening over time. The urban public spaces that harbour a wide range of these social facets have been pushed to the verge of degradation, which has led to lower quality of life and overall community engagement (Torrey, 2004). To sustain the public spaces, it is important to understand this intricate relationship between cities and their inhabitants and how they influence each other. This research outlines how the spatial environment and its attributes affect the social lives of its inhabitants by facilitating the formation of Third Places. Through a place-based study, this research highlights how the urban setting of a recreation public space and its immediate neighbourhood can influence the formation of Third Places for shared community interests and healthy expression of an individual's aspirations and goals. The primary objective of this research was to conduct an empirical analysis to understand the inter-relationship between the analogous concepts of Third Place and Public Space in the Indian context through the case study of a lakefront urban public space. The precinct of Dighalipukhuri, a lake and adjoining urban park, in the heart of the city of Guwahati, Assam, India and a popular public space has been chosen for the case study. A comparative analysis and juxtaposition were done on the qualities of successful public spaces as put forward by Whyte (1980) and the characteristics of Third Places described by Oldenburg (1989). The research relies on data collected from an onsite itemized rating questionnaire survey and reconnaissance survey. A calculated sample size of 170 was considered based on the total footfall count using Cochran's Formulae. Respondents were selected randomly to minimize participant bias and to achieve a fair share of respondents across different age groups, gender, income level and period of residency. The data collected were analysed using regression and correlational methods and a matrix was generated to understand the association between the variables.



SMUS23_08-02

Visualizing Urban Nature: Ethnographic Approaches and Explorations

Session Organisers:

Jenia Mukherjee

Assistant Professor, Indian Institute of Technology Kharagpur

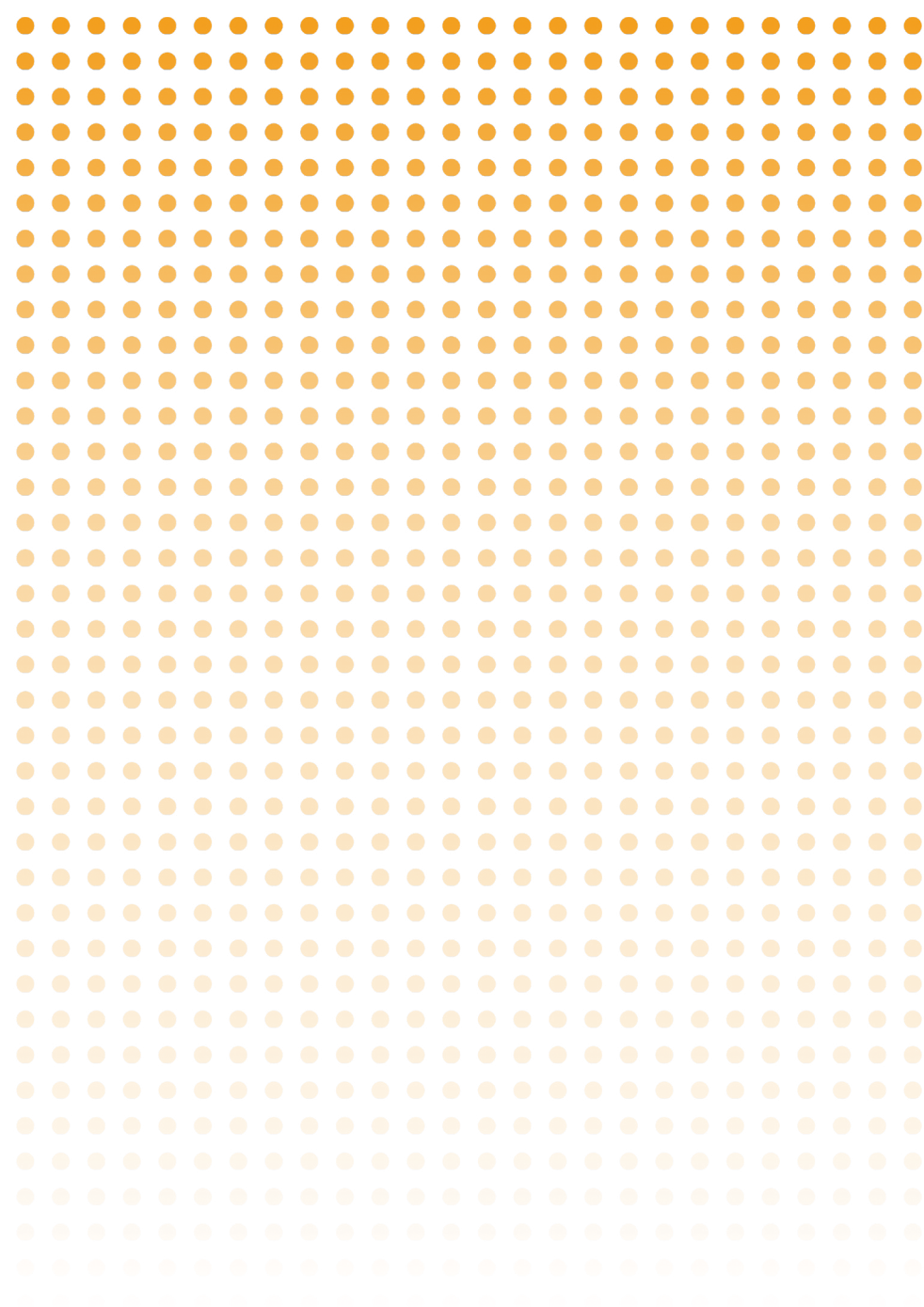
Fraya Frehse

Professor, Universidade de São Paulo

Jakkrit Sangkhamanee

Associate Professor, Chulalongkorn University





01

Visualising Knowledge?

Keywords: Knowledge hegemony; Sri Lanka; Water; Illustration; Visual Methods

Natasha Cornea ¹, Nipesh Palat Narayanan ², Surindar Dhesi ³

(1) *University of Birmingham, United Kingdom*

(2) *Institut National de la Recherche Scientifique, Canada*

(3) *University of Birmingham, United Kingdom*

In the last 20 – 30 years visual methods to collect data in both cultural geographies and as a tool in participatory action research has becoming increasingly accepted and practiced. However, in recent years several researchers have begun to explore visual methods of research communication. Examining the ways that the visual allows for the communication of complex ideas to varied audiences. This has resulted in the publication of visual papers in academic journals (i.e. Fall 2021, 2020) and used to communicate research to the general public (i.e. Pickerill 2021). Specialist illustrators have also emerged specifically to translate academic work into outputs such as comics (i.e: <https://twitter.com/PetroglyphComi1>). In “Ways of knowing” an illustrated manuscript by the authors we explore the somewhat abstract idea of knowledge hegemony through text and illustration. In this presentation we reflect on our experiences of producing the manuscript and explore the tensions of visualising abstract ideas for diverse audiences.

02

Imagining Through Images: An Ethno-Graphic Approach Towards Exploring Lakes as Urban Social-Ecological Systems and Thinking Interventions for Change**Keywords:** Videography; Ethno-graphic; Sustainability; Social-ecological systems; LakesRaktima Ghosh ¹, Aishik Bandyopadhyay ², Jenia Mukherjee ¹*(1) Indian Institute of Technology, Kharagpur, India**(2) Rabindra Bharati University, India*

Capturing social interactions and environmental realities through audio-visual techniques is an expanding field which has received significant attention in research for past couple of years. Recording videos in a ‘natural setting’ provides an additional contextual knowledge, also understood as ‘focused ethnography’, which allows to perceive (in)visible subjective articulations, sensory expressions, and situational details through video analysis. By contributing to ethnographic insights that offers an ‘emic’ perception of the situation, videographic knowledge helps make sense of the complexities emerging from interactions, practices, identities, and threats in disparate social environmental contexts. However, such methods are rarely applied in sustainability and participatory approaches of research which emphasize upon lived experiences and situated social-ecological relationships to explore the nuances of changing circumstances and possibilities for actionable interventions. Our research considers imagination and sensemaking about the coupled social-ecological systems at the first hand to visualize the ways in which human and nature are connected, and how such linkages and associated feedbacks could provide pathways for meaningful interventions at different contexts. In this study, we adopt ‘ethno-graphic’ approach for imagining human-nature interdependence and participatory ecosystem protection interventions manifested by three lakes – Jakkur, Puttenahalli and Kaikondrahalli – at rapidly urbanizing city of Bangalore, India. Based on a combination of secondary resources, insights from key informant interviews and videography as a principal method, we intend to deepen the understanding about how the (changing) values are attached and participatory management practices are organized in the three lakes of Bangalore. The study specifically highlights the nature and roles of the lakes as social-ecological systems through communicative visuals, advocating for an imagination of the sociocultural and ecological significance of the lakes in the city. In doing this, the research stands up for innovative applied videography approaches which cater to collaborative involvements to design a sustainable social-ecological systems in the cities.

03

Visual Grammar of Public Spaces – An Assessment of Play Language Method to Measure Urban Streets as Public Space

Keywords: Visual Grammar; Play Language; Public Space; Urban Street; Spatial Configuration

Madhivadhani K ¹, Dr.Jinu Kitchely Joshula ², Sudharsanamurthy P ¹

(1) *Department of Planning, Anna University, India*

(2) *Thiagarajar College of Engineering, India*

Communication is a process of creating and sharing ideas, serves as a foundation for urban planning. Spatial communication, the visual grammar helps to binding up the built environment with its associate intangible features. It is through the visual grammar alone that a judicious pattern of location of public spaces and all other encompassment can be ensured, growth process in lagging urban spaces generated through the establishment of tangible active spots, potable gathering zones, or advocacy of spaces, the process of over-urbanisation of large urban centres and the whole composition linked up in a hierarchy of public spaces in an integrated way. By understanding the importance of urban streets as the core contributor of vibrant public space, in order to establish the level of competence proposed meanings of space by assessing the impact of visual components as perceptual factors. This paper presents an inventive visual survey method used to model the spatial configuration of public spaces, in order to analyse the factors contribute to perceive impression of safety and crime free environment. Visual Grammar is an exponential spatial play language, the tool helps to assess the possible juxtaposition of two urban elements in correlation of placing visual elements in relation to one another will establish a concurrent structure. This study adopts two major urban elements such as urban streets and public spaces. The grammar of visual language is the same as for any language: to define its basic elements, describe its patterns and processes, and to understand the relations between the individual elements in the system. Visual language has no formal syntax or semantics, but the visual objects themselves can be classified[1]. Interpretation of urban form into visual language is the accomplishment of set of sequential rules based on the synthesis of structural visual distribution of the elements. This study is an attempt to identify the benefits of feasible positioning of urban spatial elements in the built environment, which will help to create cohesive urban environment for better social inclusion.

04

A Visual Narrative on the East Kolkata Wetlands: Towards a ‘Right’ Based Approach

Keywords: East Kolkata Wetlands; Water Justice; Visual-narrative; Human Rights Based Approach; Political Ecology of Water

Souradip Pathak ¹

(1) Indian Institute of Technology Kharagpur, India

The East Kolkata Wetlands (EKW) (12500 ha) serves as the natural kidney of the city of Kolkata. The inhabitants through their indigenous practice of sewage-fed fisheries and agriculture in the naturally developed waterbodies (locally known as Bheri), contribute significantly in developing the city's very own natural waste-water management and sewage treatment mechanism over the centuries. Such wise use of wetland practice has enabled the ecological niche to earn the entitlement of West Bengal's only Ramsar Site in 2002. Thus, being evolved as a 'living system infrastructure' encompassing all the biotic and abiotic components, the EKW ecologically subsidizes the city of Kolkata through facilitating with all the four ecosystem services (including provisional, regulating, supportive and cultural services). The community conducting their indigenous practice of sewage-fed agriculture and fisheries are yet to be facilitated with some of the basic livelihood rights including access to safe drinking water. While the inhabitants from the rest of the urban counterpart are accessing drinking water at free of cost, the community from EKW still compel to rely upon some needs and demand driven arrangements which leave a significant imprint upon their socio-economic livelihood. This paper aims to capture the gravity of the ground reality in light of water justice through involving the conceptual frameworks of human rights-based approach (HRBA) and political ecology of water. Therefore, this study adheres to 'ethno-graphic' research as a tool in order to underscore the grim imagery of drinking water jeopardy in the everyday life of EKW inhabitants through presenting the visual snippets from the region involving sketches, videography and photographs. Overall, the study obligates to foreground the visual-narrative of the community livelihood through deploying the aforementioned conceptual frameworks and methods to capture the gravity of the scenario.

05

Urban Transformation through Cultural Co-Production: Psycho-Geography of Fluvial Design

Keywords: Psycho-geography; Built environment; Entrepreneurship; Corporate social responsibility; Urban design

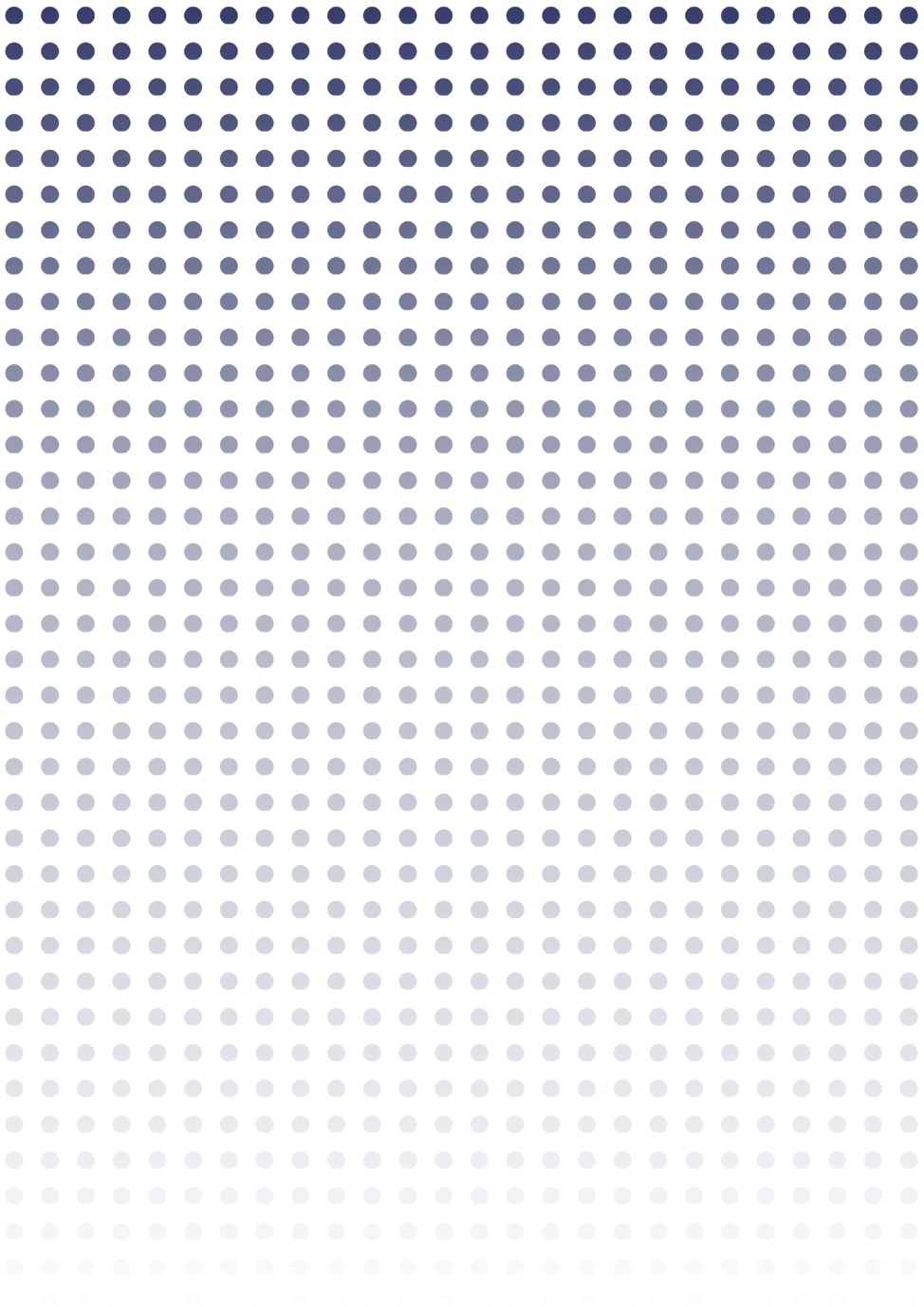
Prateek Negi ¹, Upasna Ghale ²

(1) SDS Uttarakhand University, Tehri, India

(2) Pestalozzi, Dehradun, India

The paper focuses how the small town of Mussoorie has influenced the cultural environment of the urban space. The Shiv Temple at the peak of Lal Tibba, Mussoorie marks the origin of the distributary water for both Yamuna and Ganges in form of Aglar and Rispana respectively. This is a very unique point in the Himalayas where a single origin marks the birth of the waters for both Yamuna and Ganges before their ultimate confluence at northern plains at Prayagraj. Such claim about the place still in the process of scientific study as mentioned by National Institute of Hydrology. Recent works to rejuvenate the river Rispana are being under consideration but need more academic and geomorphologic studies before any significant changes. Hence, the term 'cultural geomorphology' has recently been proposed by Ken Gregory to encompass cultural reactions to and perceptions of landscape, and how these should be considered by geomorphologists, especially in terms of improving environmental management. Where river waters are of religious significance, such as in parts of India, river-management strategies need to take this into account. Such cultural dimensions are also vital to successful conservation of landscapes. The academic significance of such studies is being cited in the works of Peter Jackson in his work "Maps of Meaning" written in cultural-geographical settings. When Jordan Peterson published his "Maps of Meaning" he clarified that the cultural settings play an important role in shaping the mental maps and meaning associated with them. Moreover, Nick Blomley and Josephine Gillespie call for more aggressive legal activism to rejuvenate such cultural features in their array of foundational works on Legal Geography. Information provided by the relative government functionaries regarding this project can be attained through the letter number 16(1) RTI/Inf/376-NIH/2020-NIH dated 21-12-2020 from National Institute of Hydrology and where the researcher has asked for the information and necessary action on the aspect of strategy about the rejuvenation. The 'Right to Information' application registered as MOENF/R/T/20/00482 dated 07-12-2020 via Prateek Negi to 'Central Public Information Officers' of Office of Prime Minister of India and Ministry of the Environment, Forest and Climate Change were resorted to in order to acquire further information regarding the cultural and ecological aspects regarding the rejuvenation of the river. The paper also shares key aspects of designing and planning from the scholars of Università IUAV di Venezia, which were surfaced on the draft during the international conference of AESOP during September 2021. The data collection regarding works of the development executed through the medium of 'Right to Information Act-2005' under the provisions of the 'Constitution of India'. The issues related to the cooperative housing is subject to the true and authenticated information as per the records of the government's officials. The research methods focus on the aspects of cultural geomorphology whereby the cultural trends and prevailing fluvial morphology of the city bring to the notice about the improved aspects of urban morphology. The project deals with the idea of gentrifying the inner township schemes in order to bring about the significant changes in the urban designing. The place in concern is the cantonment town of Landour in Mussoorie (India). The key political figures and entrepreneurs want the town to be shaped up like an Ivy League university styled town. The corporate social responsibility (CSR) initiatives are excessively being put up to have a closer glance into urban morphology. The project deals with the elements of psycho-geography and how

certain individuals perceive the urban environment in order to develop a plan for better educational and residential facilities. The more focused approach rests on the facets of urban planning since the psycho-geography of a place deals with the aspects of improved urban policy. Be it politicians or entrepreneurs, their psycho-geography and their plans of gentrification are needed exclusively in the Himalayan environment.





SMUS23_11

Multimodal Data Integration for Spatial Research

Session Organisers:

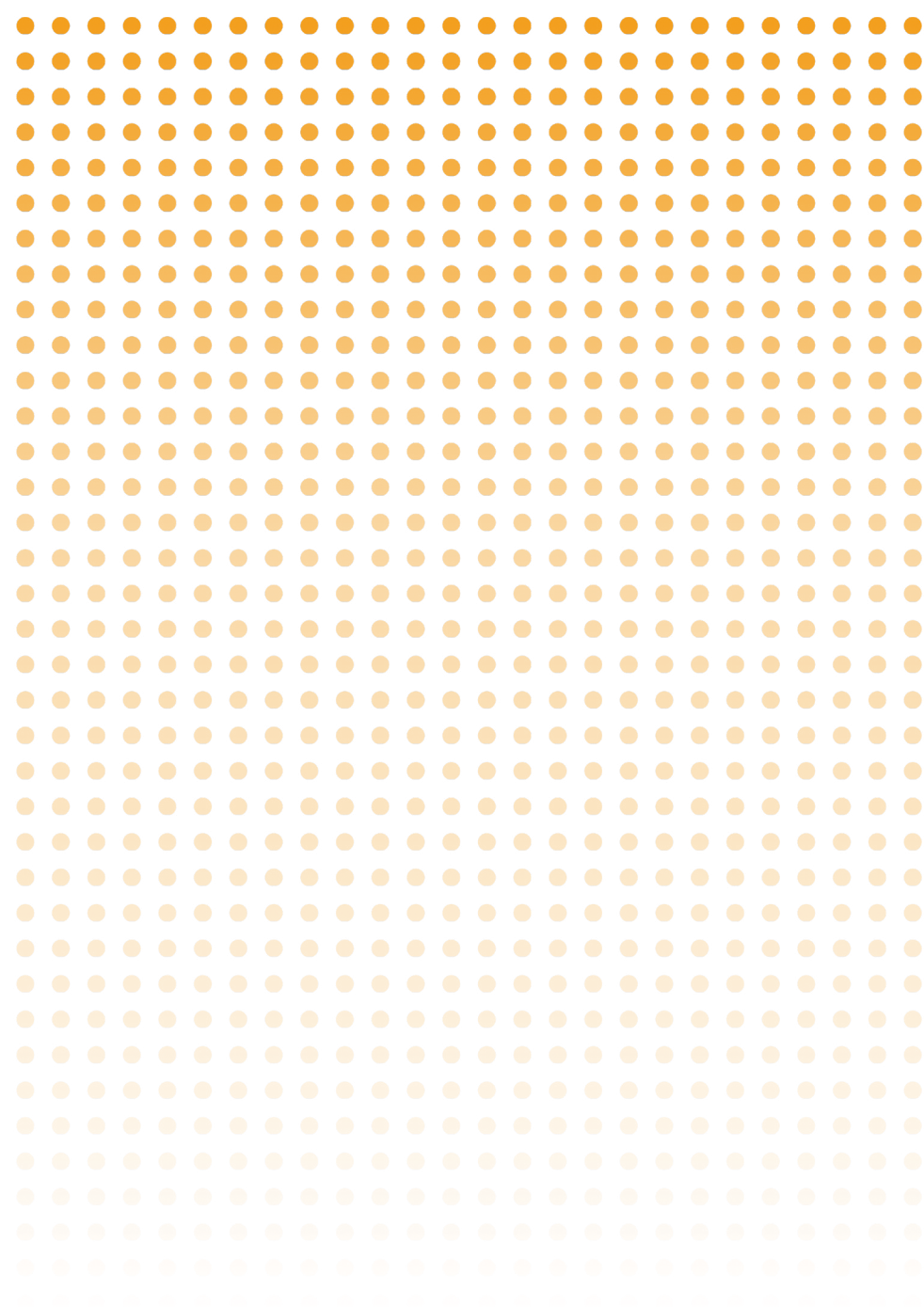
Anna Juliane Heinrich

TU Berlin

Séverine Marguin

TU Berlin





01

Transdisciplinary Research on Urban Water Resilience: Assessing Flood Vulnerability in Chennai.

Keywords: Conservation Plan; Data gaps; Heritage plan; Information asymmetry; Local Area Plan; Statutory planning process; Transdisciplinary planning

Dhuruvaloshini. M¹, Amanjeet Kaur¹

(1) National institute of technology Hamirpur, India

The case of urban sustainability changes over time in terms of both magnitude and emergence of new multiplying issues seen over time. This is mainly due to the fact unlike regional towns; urban fabric is open to more changes in all aspects. It is also noted that, transdisciplinary approach has become an essential measure with increase in demand for achieving urban sustainability as it addresses problems in reference to various frameworks. The research methodology can be used to achieve urban sustainability while bridging the gap between fields and also can be used to generate influence on creating a sustainable environment of the urban poor whose conditions are mostly neglected due to scale of the region and failure in accountability in terms of looking into other vital conditions. To illustrate the practice of Transdisciplinary research we can see the study of flood resilience scenario in Chennai, Tamil Nadu.

Chennai, an urban metropolis of Tamil Nadu located along the coast of Bay of Bengal, in rain shadow region of the Western Ghats. Chennai is seeing an increase in the population growth rate of 2.41% and economically has third highest GDP per capita in India, making it one of the main metro cities. The location of the city along coastline makes it highly vulnerable to floods, droughts, storms, cyclones and tsunami. The change in coastline and sea level rise on an average of 1.3mm per year due to climate change has become an added matter of concern to the city for present and future. The watershed of the region is defined by Cooum, Adayar, Kosathaiyar Rivers, Buckingham canal constructed in early 19th century for navigation, various lakes, about 50 tanks and a network of canals. Master plans in Chennai have focused on covering up Eri, marshland and big patches of backwaters to accommodate new migrants and to cope up with increase in population. TNHB filled dry lakes in Ambattur and Mogappair 1980s under Eri scheme. Around 2000s Pallikaranai marshland in Perumbakkam and Semmancheri were filled to make residential plots owing to extension. Under land reclassification from 2008 to 2017 250.576 hectares of agricultural land were converted. Big structures such as the airport are constructed on the banks of the Adyar River. Outside the city limits and we have a host of engineering colleges and IT companies constructed on water bodies, and marshlands. The Chennai Mofussil Bus Terminus (CMBT) and Koyambedu wholesale market, both of which are one among the biggest in the continent located at Koyambedu, is also a flood prone area. Many automobile and telecom SEZs are also built on catchments. Hyundai motors have a factory near the Chembarambakkam Lake and SIPCOT is located at a point where the Kovalam creek drains. Such rapid and unplanned economic growth and an ever-increasing demand for housing have altered and led to an overall increase in vulnerability to flooding. In 2015, Chennai recorded rainfall depth of 348 millimeters over a 24-hour period, exceeding the 1:100-year annual recurrence interval rainfall depth estimate. The risk of flooding in Chennai is expected to worsen with climate change. Climate models project heavier rainfall by midcentury. Sea level rise, projected at 4–6 millimeters per year up to 2050, will worsen coastal flooding and the tide-locking of drainage outlets. Higher storm surges from tropical cyclones can prevent the free drainage of storm water and increase reliance on pumping.

While many planning and infrastructure strategies touch upon water management of Chennai, a common platform for strategic interference which can prevent future losses is seen less. Taking into consideration of points noted, this paper aims to analyze the water resilience of Chennai city by observing the existing changes in the environment through spatial concepts such as location, field, network, event etc. which aid to achieve accuracy and projection for future thereby giving clear cut solutions. Transdisciplinary research aims on establishing an initial set up and open doors to more insights and issues which may arise through time on the study region. A transdisciplinary approach allows noting down various stakeholders participation needed in order to attain resilience to flood around watershed regions of Chennai. Transdisciplinary research typically asks for theories of change, this can be conceptualized into frameworks by analyzing spatial concepts based on their location, field, event, accuracy and meaning. The paper aims to analyse the current situation by taking into account involvement of various levels of organisations and their direct and indirect impact. The study also focuses on seeing social context of urban fabric and its changes due to flooding which helps to establish a relationship between social and spatial context in order to form a sustainable urban solution. The data analyzed is acquired from second hand data collection through visual analysis, cloud sourcing (open source information) and policy analysis through open government platforms, census data, and pre existing documents by city corporation research. The analysis is done by rating each wards in Chennai according to split up provided Chennai metropolitan Development authority (CMDA) under each factor identified. This assessment of the region in terms of flood risk is based on 5 major sectors namely Intensity of hazards, frequency, policies, Land use pattern, eco system. This would help in formulating solution by analysing and segregating the vulnerability area. The assessment is done by methods spatial data collection methods such as GIS data collection on influence of climate change in the study region (planar elevation, water bodies, population density, ground cover, water table analysis), challenges faced by vulnerable communities (disaster risk analysis of flood plains, urban green plains and drainage pattern), pattern of governance, social and infrastructure development and their impacts (quantitative data analysis). Values are given to each sectors and the intensity of values in a graph shows the disaster resilience index(DRI) of the region which in turn shows hotspots and vulnerability regions. The overall study shows areas of interests or hotspots which are in need of flood resilience strategies. The identified hotspots are graded in terms of urgency and suggestions for short and long term implementation are noted for each zone. Thus, creating a common platform where long term analysis can be done in stages if initial data collection is established thus opening door to more insights.

02

Overcoming Information Asymmetry and Data Gaps in Local Area Planning: Case of Jaipur World Heritage City

Keywords: Conservation Plan; Data gaps; Heritage plan; Information asymmetry; Local Area Plan; Statutory planning process; Transdisciplinary planning

Tanya Chaturvedi Vegad ¹, Pooja Agrawal ², Pushpak Bhagwati ²

(1) *Dronah, India*

(2) *Aayojan School of Architecture, Jaipur, India*

Local Area Plans and Special Area Plans for a Historic City Core are the focus of this study. The case selected is Jaipur World Heritage City's Special Area Heritage Plan. This study chronicles the practical problems associated with a less frequently undertaken part of India's statutory development planning process, i.e., planning at the local level. Core challenges encountered are information asymmetry and gaps in data. This study aims to support transparent and accountable decision-making in the participatory planning process of urban heritage, in particular, and the larger discipline of planning in general.

The underlying hypothesis is that data sets collected for heritage tourism, Historic Urban Landscapes, heritage precincts and core old city areas are completely disconnected from the needs of development planning. This presents difficulties in surveying, gathering secondary data, integrating and verifying multi-modal data, bridging data gaps, and bringing credibility to scenario analysis, projections and estimates.

The study methodology includes a comparative analysis of planning norms and practice; followed by a literature review comparing planning good practices with the case of making Jaipur's Special Area Heritage Plan. A literature review of research on information asymmetries and data gaps in related disciplines, such instances encountered in the Jaipur case are identified and compiled. The study culminates into a charting and analysis of existing accomplishments and future opportunities and recommendations for various components of the heritage local area planning process.

Upon comparison of components of typical Local Area Plans within Development Plans vis-à-vis Conservation Plans and Jaipur's proposed Special Area Heritage Plan, we find divergence right from the very intent of each of these. The ever-expanding urban perimeter appears to be the primary focus of the majority of development plans for urban agglomerations. Core city areas, historic districts, and urban villages can be readily sidestepped by delegating them to a Local Area Plan or a Special Area Plan, both of which are rarely created. This provides an easy way to circumvent these areas. There is not a single city in India that has a Local Area Plan for heritage as of the year 2022. Components of the obligatory Development Plan don't address the Historic Urban city core. The requirement for "special area plans" is given as the rationale for neither conducting surveys nor implementing solutions. When such historic cores do get attention, and documentation starts, the data leans very heavily to the conservation discipline. There is no inter-departmental co-ordination between heritage surveys, the infrastructure utility agencies and the disaster management teams of the city.

A detailed literature review of good practices from other cities under HRIDAY and PRASAD schemes are undertaken. This is done with the view of comparing planning good practices with the case of Jaipur's proposed Special Area Heritage Plan. A comparative study of components of these plans shows that the Development Plan typically include sectors of Land use, Mobility,

Infrastructure, Social Infrastructure, Environment – Landscape and Disaster Management. In comparison, plans for heritage city cores, like Jaipur and Ahmedabad's heritage city planning exercises, are trying to include components of tangible and intangible heritage conservation. They are included as Conservation Plans, Building use Plans, Tourism and Interpretation Plans; and a "heritage sensitivity" in the remainder sector plans.

A tabulation of typical planning stages and methods, with indication of methodological issues is undertaken with a view to identify and compile incidents of information asymmetry and data gaps encountered in the Jaipur case. A cyclical planning process includes stages of identification, assessment, recommendation, implementation, monitoring and review. In each stage of this process, accurate data collection, data visibility and analysis are critical to success of each stage and each cycle. In this study, we compare data sets and planning process for various sector plans of Jaipur. Through the Jaipur example of creating India's pioneer Special Area Heritage Plan pilot, we find that:

- Data collection is inadequate, non-numerical, blind to other emergent uses, not available in the public domain.
- Understanding demographic patterns remains unclear and generic when it is based on data collected at 10-year intervals, for the census. Intra-decadal influences like an economic recession, a local epidemic or global pandemic, that have shorter time spans, don't get reflected accurately in trend analysis.
- Despite IT projects like the Rajdharaa, City 3D, Panoview etc., a lot of mapped data and city level 3-dimensional modeling remains unusable, because it isn't amenable to abstraction and processing needed in planning exercises.
- Using these data sets requires pre-training for professionals used to other platforms, apart from cumbersome official government access formalities.
- Statistical models and projections for social sector interventions, economic interventions like tourism and interpretation planning, remain vague in the absence of adequate data.
- Heritage structures are documented through a very summary process of Heritage inventories, which do not provide adequate information for planning and projections.
- At the level of heritage byelaws, there is a blanket ban on any new construction, modification or addition to heritage structures. "Modernization" is listed as a prominent threat to heritage conservation. Yet, building services and appliances do keep getting upgraded as per aspirational lifestyles. This implicitly necessitates modifications in plans, additions to facades and openings and altered skylines. Yet, heritage inventories don't mark these in the "sketch plans".
- Components necessary for addressing disaster management and access, like dimensions of staircases are not indicated, doorways, windows are not marked, and directions of shutter openings is not indicated.
- If and when detailed measured drawings are undertaken for heritage buildings, only then do these problems get highlighted. Such expensive and time-consuming exercises are not undertaken everywhere. This makes conservation and reuse planning difficult.
- Such detailed information is not available to agencies outside of the heritage purview, bringing information asymmetry.
- Planning for universal access, fire safety, flood evacuation or earthquake risk reduction, become very difficult to perform.
- Implementing recommendations in a multi-stakeholder environment needs a consultative transparent process at all stages. As of now, this is not easy to achieve, despite mandates for data-sharing.

- In the absence of reliable, open-source, real time data, no plan can envisage a continuous asset management of the project area or utilities, or for disaster risk management.

The findings are categorized into two:

- Steps or Components where Information asymmetry was encountered
- Steps or Components where data gaps were encountered

The comparative study is presented in the form of an analysis matrix. After analysis, reasons for the observed issues are described, and several interventions are recommended. Review of existing research on information asymmetries and data gaps in related disciplines is undertaken, to inform the analysis of this study. Existing accomplishments and future opportunities are highlighted for recommendations to various components and steps of planning.

This study documents the difficulties found at various stages of the planning process. It is hoped that a new conversation between all stakeholders can be initiated. This is vital for building a new knowledge base in statutory planning at the local urban level, especially for core , old city, heritage areas.

03

Challenges of doing Ethnographic Fieldwork amongst Subaltern Community Leaders in Delhi

Keywords: Civil Society; Community Leadership; Extended Case Study; Multi-sited Ethnography and Subaltern Agency

Aditya Mohanty ¹

(1) Central University of South Bihar, Gaya, India

This essay examines how does territory influence the modalities of subaltern community leadership by deploying an innovative qualitative research method i.e., multi-sited case study method. It strategically selects neighborhoods by capturing the nuanced engagements of the subaltern valmikis with the everyday state (i.e., a powerful trope mostly deployed by anthropologists to see through the everyday mediations of people with the state). Many empirical studies done on the nature of civic associations in urban India, for instance, by geographers (especially see studies of Lama-Rewal 2007 and Ghertner 2011 on Delhi) conclude that participatory urban governance programs effectuate middle-class activism. Subaltern agency in such a set-up is either presumed to be sterile and vacuous on one hand or populist/clientelist on the other. Therefore, my contention in this essay, is that there is a need to move beyond such binaries and instead examine the subtle ways in which newly emerging patterns of community leaders like Resident Welfare Associations (RWAs) or Youth Associations operate in conjunction with older forms of subaltern community leaders like *pradhans* or traditional community chiefs in devolving radical modes of what Roy (2009) calls 'civic governmentality'. Community participation under such a regime then accentuates radical routes of engagement of community leaders with the everyday State. But there also runs the risk of community leadership being fraught with dangers of nepotism and partisanship. Different sub-groups within the community may tussle for space, and this in turn shall create contention over issues like 'who manages the process of participation?' (Robinson-Pant 1995, Patel and Mitlin 2002). In fact Urban geographers like Coelho et al (2013) have dubbed contemporary Indian cities as 'Participopolis' for they end up notoriously co-opting particular sections of the population under the guise of participatory exercises. Studies in other non-South Asian contexts like those by Balderacchi (2016) show how Venezuelan Community Councils (CCs) was hijacked by the government through ad hoc legislative measures that propelled government-controlled participatory forums. Other scholars like Arabindoo (2008), Coelho and Venkat (2009) and Mahadevia et al (2016) however, through their studies in Indian cities have concurred that neighbourhood associations or Resident Welfare Associations' (RWAs) engagement with the State is way more sophisticated and strategic. Thus, the distinction between what scholars term as 'civil' and 'political society' (Chatterjee 2014) seems to be blurred. This essay helps us trace the modalities through which such an enmeshing is facilitated by old and new community leaders in different types of subaltern neighbourhoods.

The study conducted for writing this essay shall therefore adopt a unique approach to examine the emergent patterns of community leadership among subaltern groups in urban India i.e., the case of Valmikis (an erstwhile subaltern/marginalized group belonging to the Dalit caste or backward strata within India's majoritarian Hindu society) in Delhi. It adopted a multi-stage 'purposive' sampling method at two levels – a) to choose the multiple sites by using the extended case-study method and b) to identify the key types of respondents across different types of Valmiki neighborhoods by using the multi-sited ethnography method. This essay thus is a methodological reflection on a relational reading of urban subaltern agency. Attempting to overcome, what I term as 'anthropological cataract' and 'geographical myopia', this essay is based on an innovative

multi-case ethnography of community leaders among the Valmikis (a marginalised community of sanitation workers) in Delhi. I herein evidence how a 'multi-sited extended case study' approach (that combines the epistemologies of 'Multi-sited Ethnography' (Marcus 1995) and Extended case study (Burawoy 1998) helps us understand the new conduits through which new regimes of participatory urban governance is effectuated.

This essay draws from a three-phase, four-year long innovative ethnography i.e., multi-sited extended case study, which tried to eliminate two methodological blind spots. The first is 'anthropological cataract', wherein, we end up getting too engrossed in exploring the social and cultural ecosystem to the extent that we may lose our real focus, i.e., urban governance-induced political subjectivities. So randomly selecting a representative Valmiki colony each (viz., resettlement, illegal, urban village, and legal) would have provided us with reams of data that merely galvanized the 'particularity' of the case in question. The second 'methodological blind-spot' is 'geographical myopia', wherein our fit to capture territorial specificities of scale or magnitude might end up ignoring the politics of representation and encourage one to select each type of community leader from different administrative units of the region under study. A deeper anthropological sensitivity coupled with territorial knowhow was thus the key to this process.

The findings from this study shall thus help us map the emergent patterns of community leadership as elicited from the variegated subaltern landscape in Delhi. Valmiki neighborhoods in Delhi have historically been self-governed through pradhans or traditional community leaders. Within the urban demographics of Delhi, the Valmikis along with Jatavs and other Dalit sub-castes account for 20% of Delhi's 17 million voters and hence are a critical vote bank. My study instead brings to the fore four key prototypes of community leaders that have emerged in subaltern neighbourhoods: a) Old-school Community Leaders – i) Pradhan or Sarpanch or Choudhry and b) New- School Community Leaders – ii) Youth Association Members, iii) Right-Wing Youth leader and iv) Self-Employed Entrepreneurs. Drawing from ethnographic vignettes, I elucidate upon the four-fold typologies of community leaders that have emerged among the Valmikis, and how they differentially navigate the old and new contours of subaltern politics and geographies.

Though at the territorial level, the study of old and new community leaders i.e., Resident Welfare Association (RWA) personnel and traditional chiefs or Pradhans in different types of Valmiki colonies in different parts of the city which I studied in this project, can be dismissed as a case of mere empirical variation. But this essay evidences how subaltern agency has emerged as a differentiated entity with a heterogenous composition (i.e., which involves a melange of civil society actors like traditional chiefs or pradhans, youth leaders, neighbourhood association representatives etc. It also shows how with the onset of regimes of populism and middle class aspirations amongst subalterns, subaltern agency has shaped up as per temporal demands (i.e., the affiliation community leaders have with political parties at the Ward/ State/ Central level) and spatial materiality (i.e., the type of neighbourhood in which the Valmikis' reside – legal/unauthorised/resettlement colony/urban village).

Hence, to successfully capture the emerging dynamics of urban futures, this essay argues that in cities of the global South, we need to curate the contours of classical ethnographic research. There is a need to conduct spatial research with a contextual sensitivity. It is only such a critical ethnographic praxis that can recuperate area studies from its territorial underpinnings. Such a strategy emphasizes on seeing the urban as an ever-evolving space of contextual and heterogenous negotiations. Finally, in so doing, this essay iterates the salience of brokerage or mediation as

a new praxis of negotiation with the Everyday State in both South Asian (Bjorkman 2015) and non-South Asian (Koster & van Leynseele 2018, James 2011) contexts. Thus, the co-constitutive character of community praxis and subaltern agency, as discerned in this essay, shall ultimately help us devolve empirically grounded but theoretically informed conceptualizations about the urban sociological futures.

04

Gendered Mobility and Climate Action

Keywords: Participatory research; Mobility; Gender; Inclusion; Climate Action

Vidisha Dhar ¹, Anamika Sarker ²

(1) *C40 Cities, Urbz Collective, India*

(2) *Jindal School of Art and Architecture, India*

In any city, as the economy grows, the need for a fast and reliable mode of transport also increases to move goods and people. Mumbai is no exception. Increased urbanisation and economic activities concentrated in certain areas result in the need for higher mobility among city residents. Thankfully for the city, a robust suburban rail network system runs 2,342 train services and carries more than 7.5 million commuters daily. However, the infrastructure around the rail network, such as the last mile connectivity, public toilets, and accessibility, causes enormous challenges for commuters daily, who sometimes risk their lives to reach their workplace. This lack of infrastructure also forbids many residents from using public transportation, thereby increasing their dependence on private vehicles. As a result, the roads are congested, and carbon emissions are constant. In India, the transport sector is the third-most CO₂ emitting sector, with road transport contributing to more than 90 per cent of the total CO₂ emissions. As of 2003-04, Maharashtra contributed 11.8 per cent to the country's total CO₂ emissions from the road transport sector.

A modal shift to lower-carbon transport systems is paramount. Public transport becomes a strategic entry point in the systemic transformation required to combat the current climate crisis. The city and state governments must support this transformation by boosting investment in public transportation and non-motorized transportation infrastructure to make it more accessible. The previous mobility plans for Mumbai have only addressed the quantitative aspects of mobility, using numbers to represent people. When tackling the issue, people who commute in the city must not be neutral citizens, i.e., their identities and subjectivities should be accounted for to ensure an inclusive public transport system. Various factors affect travel, ranging from gender, marital status, economic class, occupation, domestic responsibilities, etc. These have effects on the choices that people make, what mode of transport they use (or are compelled to use), what time they commute during, where they live, whether they travel alone, with dependents or in groups, and how many different modes of transport they use in one trip. The cumulative effects of these choices have resulted in observable trends globally. This study brings a pertinent point to the discourse of sustainable mobility in cities: varying travel behaviour vis-à-vis gender using participatory approach.

A growing body of literature documents the difference in men's and women's mobility patterns and the respective carbon emissions. Women are expected to play triple roles of production, reproduction, and community management which fundamentally changes the practical needs of women while they travel. Instead of simple considerations like availability and proximity to transit, complex challenges include making more complicated excursions for activities such as childcare, domestic shopping, maintenance-related tasks, etc., impacting how women move every day. Following this arises the fact that women's trips tend to be during off-peak hours and often carry more than just themselves- dependents such as children or elderly persons or goods and groceries. Women, especially those from lower-income groups, are burdened with greater domestic responsibilities and weaker access to household resources, compelling them to use less expensive and slower modes of transport. A working paper published by the World Bank Group in

2021 reveals similar mobility patterns while commuting to work in Mumbai- with greater reliance of women commuters on public transport and walking than men. Men, on average, also travel farther than women to work. The modal share for women is 20 per cent versus men, 17 per cent, for rail travel. For the bus, it was 12 per cent versus 8 per cent, and for walking, it was 38 per cent versus 28 per cent. There is a growing agreement on a need to account for women's specific needs in the planning and provision of transport systems in our cities. This research aims to investigate this gendered difference in travel behaviour and calculate its effect on the transportation sector's carbon emissions.

This research followed a participatory methodology for data collection. Mediums such as surveys, semi-structured interviews and focused group discussions were used to record the specifics of their journey from the day before. The survey recorded personal information about the user, such as age, gender and income, following the preferred mode/modes of transport used for the journey. A trip diary followed this to record the time spent in each mode, the reason for travel and how they feel after the trip. The semi- structured interviews focused on capturing diverse dialogues based on individual experiences by the commuters. These interviews were conducted until a state of diminishing interviews was reached. The focused group discussions were conducted in heterogeneous groups of two. One with the women from the lower and middle income groups and other with the higher income group.

The surveys followed a random distribution method to record 700 diverse responses that were disaggregated into income-gender groups, similar to the methodology adopted by Jain and Tiwari to measure the variation in travel choices in Vishakhapatnam. These three disaggregation tiers helped to study the difference in travel behaviour and variation in carbon emissions across gender and income independently, between incomes of the same gender group and, finally, between gender groups of the same income group. This will highlight the difference in the travel behaviour and carbon emissions between gender groups from economically richer and poorer classes and between the different genders belonging to the same economic category. Along with Income and gender based segregation, the qualitative data will be distributed in three ways- ideas shared, emotions expressed, and solutions offered that will shed light on the challenges faced by the commuter and recommendations to tackle them.

This research uses ethnographic approach and participatory methodology to compile varying experiences in everyday commute by studying individual experiences. . It combines urban design with anthropology, behavioral economics, and strategic thinking to comprehend the expression of needs and aspirations and recognize differences towards social inclusion.

05

Politics of Mobility and Data Visualization- A Case of a Four-Lane Road in Himachal Pradesh

Keywords: Roads; Politics of Mobility; GIS; Interdisciplinarity

Vidisha Dhar ¹

(1) CEPT University, India

The western Himalayan range constitutes some of the highest mountains in the world. It is renowned for its lofty heights, cliffs with rugged sides, gorges, alpine glaciers, deep river canyons, and a series of elevational belts displaying many ecological associations of flora, fauna, and climate. The Himalayas are home to 53 million people and 42 tribes. The residents of such rugged geography face many challenges in accessing basic amenities such as education and healthcare facilities because not every village is connected to the existing road network.

Improved road access is critical to the current drive for economic development and improved livelihoods in many parts of the Himalayas. Simultaneously, there is a history of almost a century of road construction in this harsh region and an expanding road network that poses risks to its sustainability. On the one hand, harsh terrain, dynamic geology, and heavy rainfall pose challenges to its construction. In contrast, earthquakes, landslides, floods, erosion, and sediment due to road construction pose significant hazards to humans and wildlife. Roads designed as a mobility corridor for fast-moving traffic disconnect people from nature and community living rather than connecting them.

The recently inaugurated Atal tunnel exemplifies this duality. This tunnel cuts across the mighty Pir Panjal range in the Himalayas at an altitude of over 3000 meters connecting the regions of Lahaul and Spiti to Manali in merely twenty minutes instead of the earlier five hours through the treacherous Rohtang pass. Critical patients in this region suffered in remote locations to access hospitals, as they had to be physically carried by others or airlifted in certain situations—this delayed treatment in extreme cases, like a potentially fatal injury. Even for treating minor diseases, the residents of Lahaul had to walk long distances, which took an entire day. These problems cease to exist today. The Atal tunnel, recently completed after 20 years of construction, has made life in Lahaul much easier. However, the locals of Lahaul have formed committees bracing themselves to preserve their ecology, wildlife, and culture, fearing rampant construction and unregulated tourism in the valley. The construction of the Rohtang tunnel in Himachal Pradesh led to the break-up of a significant aquifer, the water from which flowed uninterrupted for 14 days. This natural spring would have supplied drinking water to the surrounding communities for centuries. Second, the increasing number of tourists increases solid waste generation (most of it being plastic). The waste is burned, reducing air quality or clogging rivers and streams. While they desire a road, the residents are concerned about the expanse and variety of forest cover they will lose. They rely entirely on these forests for minor forest products such as firewood and cattle fodder. Reduced forest areas will also endanger wildlife habitats, increasing the likelihood of human-wildlife conflict. While roads in India have been well-engineered, they are not designed to respond to the fragility of the western Himalayan regions and the needs of the community.

In India, a large body of published literature describes the impact of geological hazards on roads. The Indian Road Congress has guidelines, manuals and standards for sustainable road construction and maintenance. There is also a strong presence of geological and geohazard expertise, which

can help inform route selection and road design decisions. However, it is clear that this expertise is not always applied and that road construction sometimes occurs without regard for established manuals and guidelines, causing a gap between research and practice. Although the guidelines themselves require consolidation and strengthening in some areas, including a more significant infusion of engineering geology, it is paramount that they are used. Here, unveiling the fundamental forces driving road construction from conception to completion is vital. Most road construction in Himachal Pradesh is done by the National Highways Authority of India (NHAI) or the state's Public Works Department (PWD); however, the Atal tunnel was built by the Border Road Organization (BRO), the Indian army's construction agency, due to the route's strategic importance in facilitating the movement of armed forces and infantry combat vehicles to the India-China border.

The story of a road construction involves various intangible political influences. These influences shape the road as well as its necessity. Several regions of the Himalayas remain inaccessible, and residents must continue to travel treacherous paths in search of basic necessities. The emphasis placed on particular routes over others forces us to analyze the importance of networks and why certain connections are prioritized over others that have been in the pipeline for decades, some since India's independence. This investigative research unpacks building a road network through the lens of Tim Cresswell's *Politics of Mobility* by studying a route running 300km connecting Pathankot in the state of Punjab to Manali in Himachal Pradesh, a state in the western Himalayan region. This research aims to unwind this extensive system and its process by juxtaposing the qualitative data gathered through interviews with various stakeholders involved in the construction of the road, news articles, and photography with data visualization and mapping using Geographic Information Systems (GIS). The juxtaposition of data highlights the road's social, economic, and environmental impact on its people, ecology, terrain and wildlife. This spatial method emphasizes various tangible and intangible forces and the role of various stakeholders such as the political leaders, bureaucrats, engineers, urban designers, landscape architects, pastoral community, civil society, planners, technicians, local contractors, soil experts, geologists, hydrologists, animal and forest scientists, geographers, whose participation or lack of participation results in roads that we use today—the research advocates for interdisciplinary design in the process of road building.

This research elaborates *Politics of Mobility* through representation, movement and practice, each addressing a question, why a road network is created for whom and how? Representation refers to several ideas that make the need for a route and develops its narrative for the local, national and global audience. Movement refers to the stakeholders for whom this connection is created and those excluded along the process. Practice narrates the practice of road building, which includes inter-departmental coordination and priorities, and challenges faced in the execution.

06

Building Vignettes: Reflections from Tracing the Lives of Vacant Homes

Keywords: Building Vignettes; Aesthetics; Architectural Methods; Vacancy

Ibrahim Abdou ¹

(1) University of Cambridge, United Kingdom

In 2017, almost a third of Cairo's total housing units were vacant. Yet, in the same city, over half of the population improvise their living in dense and unplanned neighborhoods. In Cairo and across the world, widespread vacancy highlights a paradoxical condition of underutilized resources and simultaneously flags an underlying anomaly causing it. Typically, academic and public discourse explain this anomaly by how housing increasingly serves as an asset of financial investment. The objective of this study is to develop a nuanced understanding of vacancy beyond the rhetoric of commodification or simple statistics. Using Cairo as its main focus, and based on qualitative fieldwork, it theorizes differentiated patterns of vacant housing, investigating how they emerge, how they are experienced on the ground and instrumentalized in discourse. In this paper, I focus on a pattern "family zones" in the suburban outskirts of Cairo's new desert cities. I use them to explore the spatial negotiations of absence and presence. As a critique of salient modes of mapping vacancy, this paper then presents a set of building vignettes – an attempt to physically trace the lives of vacant buildings by constructing a timeline through a series of drawings, diagrams and visuals. This timeline highlights moments that summarize the different phases of a building's life tying, its construction, habitation, use, and perception over time to trajectories of accumulation, regulation and improvisation influencing its supposed inhabitants. These vignettes centre temporality and spatiality in the mapping of vacancy. In doing so, I attempt to trace, analyse and visualize the physical implications of abstract spectres.

It traces different actors on trajectories of accumulation, regulation and improvisation. To untangle variegated patterns of vacancy, the research explores the shifting motives which drive actors to build, the temporalities which enable or constrain them and the legal structures which they maneuver or enforce. In doing so, it overlays the socio-political entanglements, affective meanings and cultural imaginations of vacant landscapes.

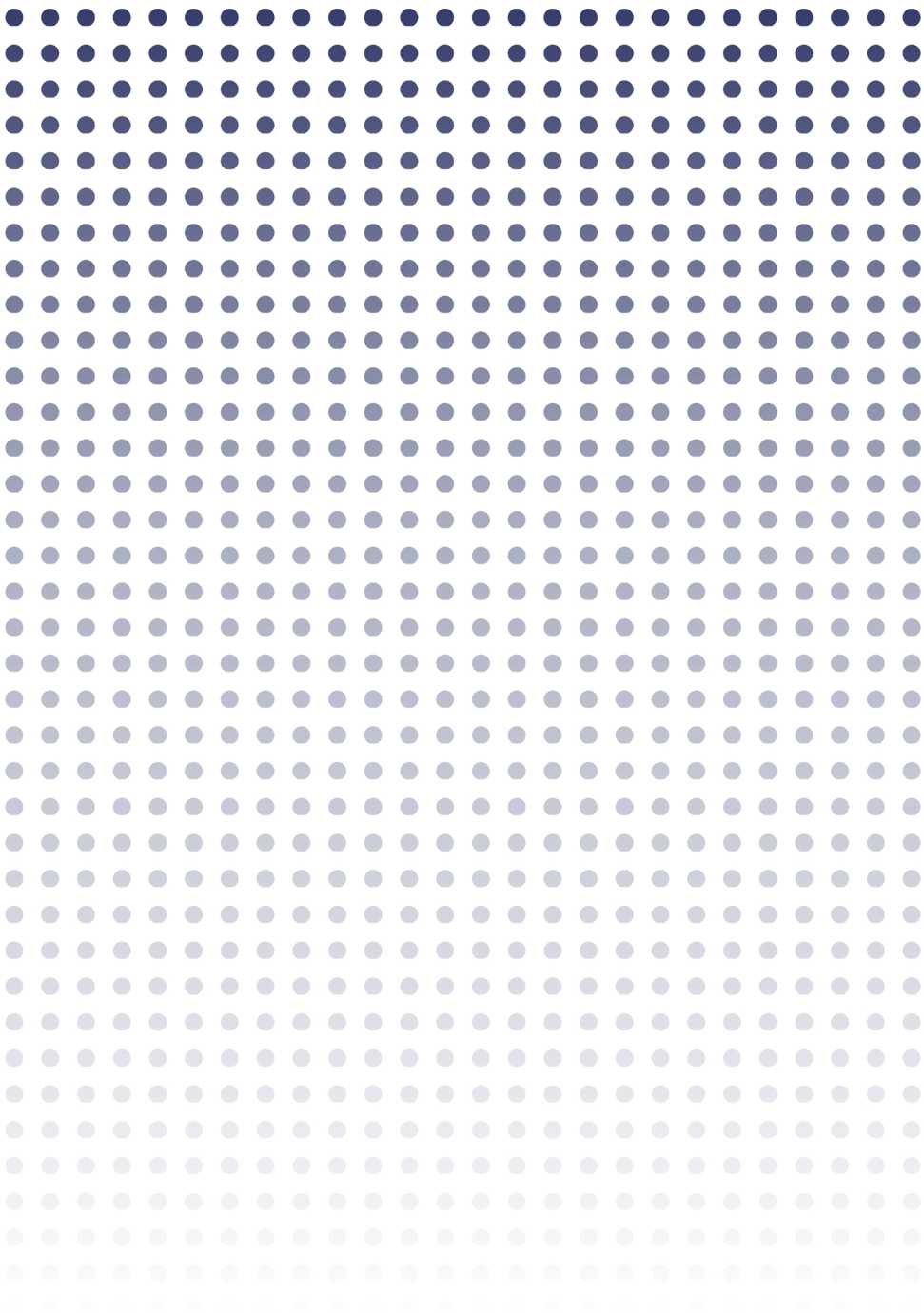
By accounting for temporality, I mean analysing vacant home over time. Instead of a momentary snapshot, I try to follow the entire lives of vacant built structures and how they intertwine with the lives of their supposed inhabitants and various other actors on trajectories of accumulation, regulation and improvisation. In other words, I try to construct a timeline of the construction, habitation, use, perception of these homes, the motive behind construction, the speed and nature of construction, the flows of money, the patterns of migration that allowed for its accumulation over time, the modes of presence or absence over time, the modes of protection the legal structures that facilitate or deter them, the forms of intermittent vacancy, and seasonal or stable occupation. More importantly, this also accounts for the related temporal experience – the experience of waiting to access housing, of being stuck in uncertainty, of anticipation from a potential demolition, or the empowering aspiration of building incrementally building a home as its value appreciates – and the various mechanisms of existing within and coping with the temporalities of fast-paced markets, or slow setups of self-governance. By accounting for spatiality, I attempt to specifically tease out the useful spatial dynamics occurring over that timeline and the physical effects, changes, and elements

that contribute to a better understanding of vacancy. This entails understanding how forms of territoriality and marking borders happens, how materialities and ornamentation get imbued with meaning, how typologies are intertwined with cultural aspirations, how legal negotiations play out spatially, how space is used by different classes, how it is protected, and how it deteriorates over time. In short, by using building vignettes, in each of these landscapes, I attempt to trace and visualize the spatial effects of abstract forces as they manifest over time.

Architectural methods, here, are fundamental part of analysing a process and articulating an argument. Rather turning neat conclusions into appealing visuals – much like a graphic novel would do – building vignettes, are an explorative space of thinking through drawing. In each step, I confront why it might be necessary to draw and what additional insight does a particular drawing offer? I explore how spatial tactics and various abstract spectres are mutually constitutive. Abstract forces inform spatial processes, and vice versa. For instance, the spatial themes of “absence and presence”, the themes of “visibility, theatrical performances or hiding”, or the themes of “decay and maintenance” become the key concepts in understanding how various spectres and how they manifest physically. First, they help better conceptualize the abstract forces shaping – for instance how legal manoeuvres can be harsh or how migrants manifest their presence or how creative destruction is understood differently. Second, they allow us to conceptualize the physical nature of vacancy in more nuanced ways as stable and gradual, erratic or temporary.

Reflecting on design as a research method, Schroder stresses the representational value of drawing, as an easy medium for a multidisciplinary conversation and an analysis of abstract forces. I take inspiration from efforts across disciplines which attempt an intersection of spatiality and temporality as a productive, yet commonly untapped intersection for instance, anthropology of emptiness understands a spatial condition as the culmination of looming pasts and potential futures and the notion of sedimentary urbanism reads buildings as spatial layers over time. Such efforts help push the boundaries of typical exercises of urban mapping seeking to document simply what exists. Similarly, both anthropologists and architects have explored what an “architectural ethnography” might mean and what illustrating anthropology would look like Lucas has described an architectural social science as focus on “a set of practices, not just objects”. I believe in these conceptual and methodological overlapping of spatiality and temporality that can truly begin to explore what an architectural social science might be.

In summary, beyond statistical data that legibly renders a building as vacant or not, vacancy is not an absolute metric, but rather, as these family villas show us, an ongoing and multi-layered negotiation of absence and presence between owning families operating from a distance, Bedouins and guards on the ground, state authorities, tenants and even between various members of the same family. All of them are on various trajectories either pursuing the dream of a family “home” or sustaining their livelihoods around it. In this empirical account and methodological reflection, I have tried to trace and visualize some of these negotiations of absence and presence in the form of a building vignette.





SMUS23_12

How Modality Matters? Learning from the Multiplicity of (Non-)Digital Discourse Analytical Approaches

Session Organisers:

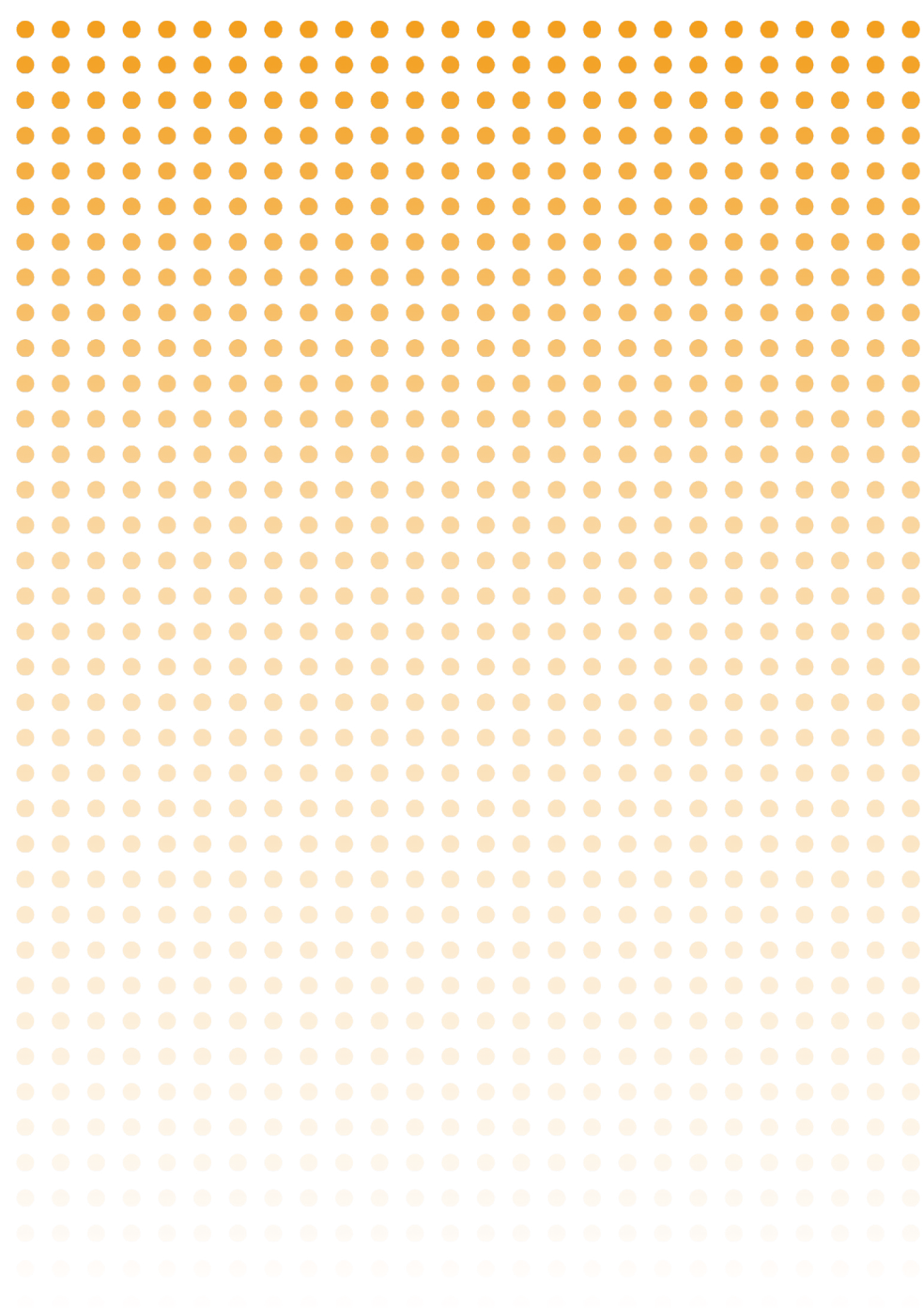
Gertraud Koch

University of Hamburg

Isabel Eiser

University of Hamburg





01

Is Grounded Theory Research Restricted to Qualitative Analysis? Integrating Topic Modeling as a Device for Theoretical Sampling in the Context of the Analysis of (Media) Discourses

Keywords: Grounded Theory; Topic Modeling; Discourse Analysis; Gentrification

Rebekka Damla Atakan ¹

(1) Department of Sociology, University of Bonn, Germany

Increasing digitalization means that more and more (textual) information can be accessed faster and faster. For interpretative research, the sheer amount of available digital text data might be overwhelming. However, with the help of quantitative methods such as text mining and (structural) topic modeling, large text corpora can be structured and subsequently made fruitful not only for quantitative but also for qualitative analyses. Particularly when analyzing media discourses with the goal of developing a theory that is grounded in the data, topic modeling can be a helpful asset.

A topic model is a statistical model for discovering multiple topics that are contained in a series of documents. Words that frequently occur together are clustered in a topic. Topics occur in multiple documents, and each document may contain several topics. Topic modeling integrates well with the approach of grounded theory for several reasons. First, it is an exploratory method. Topics can be seen as hypotheses about phenomena that arise from the data itself. Second, since topic modeling also provides information about which documents are highly associated with a particular topic, hypotheses can be developed and tested through a deeper analysis of those documents. This procedure corresponds to the theoretical sampling of grounded theory, since sampling in grounded theory is guided by the data and the emerging theory itself. Third, the use of topic modeling as a sampling method enables the development of theoretical concepts by coding the selected documents according to grounded theory. This paper presents topic modeling as a possible device for theoretical sampling in the context of the analysis of (media) discourses.

In addition to a methodological presentation of the integration of topic modeling into grounded theory, this paper will also demonstrate the implementation of a combined discourse analysis of topic modeling and grounded theory. This will be done using an example of the media discourse about two residential areas in Cologne, Germany in three local newspapers within the last twelve years. By applying structural topic modeling in combination with grounded theory coding, the changes of the discourse over time as well as discursive framings of the three newspapers can be traced. In addition, a comparative perspective on the representation of the two residential areas in the three newspapers can be adopted. Since both areas are in the process of gentrification, it is expected that the discourses have changed over time. Moreover, the two areas are at different stages in the gentrification process, so that the extent of symbolic gentrification can also be examined.

02

Conservation And Utilization of Revolutionary Historical Relics In Nanjing Old City Based On Multi-Source Spatiotemporal Data Correlation

Keywords: Multi-source Spatiotemporal Data Correlation; Nanjing Old City; Conservation and Utilization of Revolutionary Historical Sites; Knowledge Map

Xin Yi ¹, Fei Zhai ¹, Ao Sun ¹

(1) Southeast University, China

This article explores the digital conservation and utilization of revolutionary historical relics in Nanjing, China. Revolutionary historical relics refer to the historical relics of China's national revolutionary movement from 1921 to 1949. The research focuses on the multi-source spatiotemporal information of revolutionary historical relics of the old city of Nanjing. A series of studies results such as value analysis, current situation assessment and utilization suggestions have been carried out. The author firstly used data mining methods to sort out revolutionary activities in 68 revolutionary historical relics, and established a knowledge map of revolutionary activities with key influencing factors including people, locations, times, as well as activities types. Three activity themes have been sorted out, including "progressive activities led by the Communist Party", "the second political cooperation between the Kuomintang and the Communist Party", "Nanjing local underground party organization development". Then the corresponding spatial scope of each revolutionary activity theme has been analyzed with spatial dimension in three different urban areas. Combined with the temporal and spatial distribution characteristics of these three themed activities, the historical events and historical urban space are linked together, revealing the inner logic of the temporal and spatial composition of Nanjing in the Republic of China. Furthermore, it also proposes the suggestion of conservation and utilization for these three urban areas.

03

Identifying Keywords and Phrases in German COVID-19 Twitter Discourse**Keywords:** Keyword Analysis; Word2vec; COVID-19; SemanticsJulia Schilling ¹, Robert Fuchs ¹*(1) University of Hamburg, Germany*

Humanity has seen many pandemics throughout its history, including the Black Death, smallpox, and the Spanish flu. The most devastating pandemic of the 21st century to date, COVID-19, has been impacting economies and societies worldwide ever since its first outbreak in Wuhan, China in December 2019. At the time of writing, the COVID-19 pandemic has caused over 600 million cases worldwide and a total of over 6 million deaths (WHO 2022). As the ongoing global spread of the novel coronavirus is an example of the rapid spread of a disease in an interconnected and globalized world, it is not only receiving widespread media coverage but is also intensely discussed on social media like Twitter, Instagram, and Facebook around the world. These networks play a vital role in influencing the public's perception of the COVID-19 pandemic. In comparison to traditional media, social media encourage two-way communication instead of just delivering information through one-way communication to as many people as possible. Thus, social media communication has created a shift away from "the traditional linear flow of content from certain (privileged) producers to (ordinary, powerless) consumers" (KhosraviNik & Unger 2016: 206). This new dynamic empowers the population to actively participate in the production and dissemination of content and is therefore better suited to reflect the opinion of the citizenry.

Currently, Twitter is being used by researchers as a database in the analysis of the ongoing COVID-19 pandemic. A large body of research has made use of automated topic modelling approaches and sentiment analyses to identify topics related to the pandemic and to uncover underlying sentiments, especially during the first wave of the pandemic (see Wicke & Bolognesi 2020, 2021; Jang et al. 2021; Abd-Alrazaq et al. 2020; Kurten & Beullens 2021; Ilyas et al. 2021). However, what all these studies have in common is that they collected their data based on a predetermined list of keywords and hashtags, leaving out possible key terms used to describe the pandemic and its effects on society. Therefore, we are taking a step back and first look at the actual vocabulary of the COVID-19 pandemic and observe the progression of these terms over time from the beginning of the pandemic up until and including June 2021.

This, however, raises methodological challenges and there are two possible options to identify COVID-19 related keywords: (1) using algorithms such as word2vec, which use a neural network model to learn word associations, with a pre-generated list of COVID-19 vocabulary to see which words are used in similar contexts and then adding those to the list (see e.g., Park et al. 2021; Soper et al. 2021) or, (2) manually reviewing all statistically relevant keywords within the corpus for vocabulary used in COVID-19 contexts. Therefore, the goal of our work is to compare both approaches to identify their respective strengths and weaknesses.

In order to do so, we first constructed a Twitter corpus of all tweets geo-tagged in Germany between January 2019 and June 2021 using the Twitter applications programming interface (API) in combination with the twarc2 Python library (<https://twarc-project.readthedocs.io/>), producing a corpus of approximately 6 million tweets and 100 million words. These tweet locations are either an exact point location that comes from GPS enabled devices, or a Twitter Place with a bounding

box that describes the general area from where a Tweet was posted (Twitter Developer Platform 2021).

After preprocessing and lemmatizing our data, for the first option (word2vec), we then trained our word2vec model on our dataset using the *r* package word2vec (<https://CRAN.R-project.org/package=word2vec>) with the continuous bag of words (CBOW) method. After that, we used 30 initial keywords related to the COVID-19 pandemic such as covid, lockdown and vaccine, to identify words used in similar contexts. For each initial keyword, we limited the results to the 50 most similar keywords, as most occurrences after the top 50 were not related to the COVID-19 pandemic, resulting in a list of 1500 keywords. After removing duplicates from this list, we were left with a list of around 800 keywords related to the COVID-19 pandemic.

For the second option, we conducted a contrastive keyword analysis of the discourse of every month of 2019 with its equivalents in 2020 and 2021, comparing pre-pandemic and pandemic discourse, while also filtering out seasonal effects on discourse (e.g. discussion of snow in January). We used log-likelihood (LL) as a test for statistical significance as well as log-ratio (LR) as an effect size measure, as LL highlights relatively common words that are used with an increased frequency in the target corpus, while LR focusses on words that occur less frequently in general usage and with a moderate to high frequency in the target corpus, e.g., neologisms during the COVID-19 pandemic. Moreover, effect-size measures serve the purpose of showing whether the observed difference is strong or weak, whereas significance tests indicate “the high probability that the difference between two means or other findings based on a random sample is not the result of sampling error but reflects the characteristics of the population from which the sample was drawn” (Sirking 2006: 306). Thus, we first used log-likelihood to exclude all keywords with a LL-score under 3.64 ($\alpha < 0.5$), a log-ratio score greater than 1, indicating that a word in the target corpus occurs at least twice as much than in the reference corpus, and an absolute frequency of 10 or more occurrences, for each month. This resulted in over 30,000 keywords for all months that had to be manually annotated for relevance to the COVID-19 pandemic. In cases where the relevance to the pandemic was unclear to the primary annotator, a sample of 50 tweets (or fewer if the frequency of the keyword was lower) was rated independently by two annotators manually for relevance. For 100 of 800 of the keywords, there was agreement for either relevance or irrelevance for at least 90 % of the sample. The samples of the remaining keywords were rated by a third annotator. If this in turn yielded a rating for relevance or irrelevance for 90 % of the sample for a keyword, this keyword was deemed to be relevant or irrelevant for the analysis. In total, our approach yielded over 1400 keywords used to talk about the COVID-19 pandemic.

When comparing our results of the two approaches mentioned above, we discovered that of the 808 keywords we found using the word2vec method and the 1441 keywords that were manually annotated for relevance, there is an overlap of 243 keywords. This means that 565 of the word2vec keywords are not and in our manual keywords and 1198 keywords from our manual list are not in the word2vec list. Thus, it can be concluded that neither approach is suitable as a stand-alone method to create an exhaustive list of Covid-19 related keywords. While the manual approach is much more time-consuming, the automatic approach with word2vec runs the risk of omitting entire semantic fields if they are not included in the initial keyword list. Therefore, we propose a combination of both approaches as the best possible solution, where keywords are first identified manually, and then words used in a similar context are identified using word2vec. Because word2vec can of course also return results that have nothing to do with the pandemic, this list should then also be manually reviewed again.

04

Empatica as a Spatial Research Tool: A Systematic Literature Review

Keywords: Empatica; Human Behaviour; Spatial Analysis; Physio-psychological factors; Tracking Technologies

Arshi Parashar ¹, Harshit Sosan Lakra ², Shefna S. ¹, Kartik Rathore ¹, Vedankur Kedar ¹

(1) *Maulana Azad National Institute of Technology, Bhopal, India*

(2) *Indian Institute of Technology Roorkee, India*

Since the inception of urban growth and its associated forces, it has been known that human behaviour is a function of the modulations in the urban environment. Although various studies have highlighted this aspect through surveys and varied techniques, yet there is a lack of research that emphasizes the physio-psychological perspective of the study. Technological advancement has made it possible to understand such factors where Empatica technology is one of its kind. Empatica E4 is a wearable wireless multisensory device that acquires real-time computerized biofeedback with five embedded sensors, namely: photoplethysmograph (PPG), heart rate (BPM), electrodermal activity (EDA), 3-axis accelerometer, and temperature. Hitherto, an ample amount of research has been done in relevance to its importance in the medical and physiological arena. Still, there exists a dearth of research in various categories that transcends the core area. The complexity of urban diorama consists of multiple factors which render fluctuations in several physio-psychological behaviors in people, where it becomes essentially necessary to understand these dynamics. This paper, through a systematic literature review, explores various facets of Empatica exploration and its utility in different dimensions of spatial and urban planning research.

05

Spatial Planning Options to Mitigate the Effects of Urban Heat Islands**Keywords: GIS; Mitigation; Simulation; Environment; UHI (Urban Heat Islands)**Vibhu Singh ¹*(1) School of Planning and Architecture, New Delhi, India*

The Urban Heat Islands are considered a critical factor contributing to the rise of temperatures in the urban areas and hence influence heat-related mortalities. The difference in temperatures experienced in the urban areas and the surrounding rural areas can be due to many factors like climatic factors, urban morphology, presence of permeable surfaces, lack of vegetation, etc. The more the city gets urbanized, the more it poses a threat of witnessing the formation of urban heat islands. Various kinds of research on urban heat islands focus on parameters such as temperature, humidity, vegetation and canopy, etc. Research in terms of urban morphology assessment and simulation aspect of mitigation is still lacking.

The need to mitigate urban heat islands is vital as it has both human health as well as climate change implications. The increase in temperature, be it the increase in day-time temperatures or reductions in night-time cooling. This adversely affects human health resulting in general discomfort, fatigue, heat strokes, etc., especially for people having occupations in broad daylight without a shade like that as a construction labourer. Urban heat islands can also exacerbate the effects of seasonal heat waves causing heat stress and heat-related mortalities. In June 2019, some regions of India experienced temperatures surpassing 48 °C and some regions of Northern India, i.e., Delhi, Agra, Ludhiana, Lucknow, etc. and Southern India i.e., Hyderabad, Nagpur, etc. witnessed temperatures more than 40 °C. The need for mitigation is recognized in the Sustainable Development Goal 11 which is sustainable cities and communities this means to make cities and human settlements inclusive, safe, resilient and sustainable. This research focuses on correlating urban morphology with climate and using software modelling as a tool for identifying suitable strategies with the degree of impact it would have on the mitigation of urban heat islands at the neighbourhood level. Delhi, the capital of India has been selected as the case study area, as it has recorded rapid urbanization over the past decades. In India, the national capital territory of Delhi is the most urbanized with 97.5% population living in urban areas. Also, in the past decade, Delhi has witnessed an increase in high-density built-up by approximately 20%. There are many studies already conducted in Delhi for analysing urban heat islands, but no study has focused on suggesting mitigation measures at the neighbourhood level.

In the previous studies on Delhi, the urban heat island intensity was observed to be 3 °C to 8 °C and also there is a presence of diurnal variations among temperatures. Through the land surface temperature analysis of satellite imagery, it was observed that the regions of South-western and Western Delhi showed high-temperature ranges in the day time whereas Eastern and Central Delhi showed high-temperature ranges in the night time. On comparing the land surface temperature results with the landuse landcover change (LULC) analysis, it was further observed that the cause of temperature increase in Western and South-western regions is due to large chunks of fallow land which are displaying higher temperature whereas in the Eastern and Central regions the high temperatures were observed due to the presence of high-density built-up and industries in the Eastern region. In a past research, Delhi was divided into 5 Local Climate Zones depending on

urban morphology.

For further localization of the study area in Delhi, Land Surface temperature analysis, landuse landcover analysis and local climate zones were assessed to select two wards for detailed study i.e., Vivek Vihar and Ram Nagar having distinct characteristics. The Vivek Vihar ward falls in Local Climate Zone 5 which has open mid-rise urban morphology and the Ram Nagar ward which falls in Local Climate Zone 3 and has compact low-rise urban morphology. The analysis was done for mainly two categories i.e., urban morphological analysis (building height, materials, surroundings, etc.) and analysis of climate variables (temperature, wind pattern, wind direction, etc.). The analyses conducted were building height mapping for urban morphology assessment; Normalized Difference Vegetation Index mapping (NDVI) for the presence of on-site vegetation; Land surface temperature analysis for understanding the hotspots in the two selected wards; temperature variation trends – both annual and of 24 hours of the hottest day of the year to understand the hottest and coolest hour along with the temperatures.

For the simulation and scenario-building of different mitigation strategies, ENVI-met software was used for climatic modelling and predicting the best-case scenario for the mitigation of selected case study areas at the neighborhood level. ENVI-met is 3D software for analyzing micro-scale thermal connections in urban environments. The model utilizes the thermodynamic procedures that happen at the ground surface, walls, roofs, and plants. The software works on the mechanism of Computational Fluid Dynamics (CFD) that helps in analyzing an area with granular data in terms of micro-climate. The software considers factors such as the type of soil; the material used in buildings, the height of buildings; vegetation in the surrounding area; wind pattern; solar radiation; material on other surfaces such as pavements, roads; and many more factors.

06

Why Open-Source Data Works: From Tweets to Planning?**Keywords:** Twitter; Open-source GIS; RStudio; Communication; Urban PlanningSiddhesh Ravindrakumar Kudale ¹, Akshaya Kudale ²*(1) University of Illinois at Urbana Champaign, United States of America**(2) Coalition for Reimagined Mobility, India*

In contemporary literature, there have been allusions to and seldom examination of using open source data from social-media sites for use in urban planning studies: especially in the global south. What hinders this use depends on a multiplicity of parameters ranging from availability of social media to the masses and English literacy, the latter half of which however is not essential. So far as field-work or even secondary data collection goes, there are many limitations including human labour, lack of funding, digitisation of data, predetermining a process, non-cooperation of government structures, and such others.

On the other hand, in the field of communication sciences, there are some techniques that are widely used for political campaign analysis, especially often also geolocating these at lat-long coordinates. These studies have mostly had their roots in a very elitist, media and tech savvy west to be fair: yet it cannot be denied that these techniques are fairly replicable regardless of the context unlike some Urban analysis techniques. These techniques include twitter data mining, reddit data analysis, Facebook response analysis and others of the like. They have their own shortcomings and drawbacks, however one of which that cannot be denied is their efficiency with time with access to the right expertise. And speaking about the right expertise, though India is the hub for smart engineers that can be useful especially with such coding oriented tasks as twitter data, most of the coding languages are not that complicated and unattainable to the educated planner who wants to make a change.

The key aspect to working with twitter data is the open-source nature of this data, something which is essential for Indian urban development. With the lack of resources and a rapidly advancing urban setting, India is stuck with limited-access shape-files with third-parties and essential research behind paywalls, something which only favours a capitalistic society. There are many other sources of open-source data, something like Uber-movement data for some metropolitan cities for instance, though the validity of much of the available open-source data is highly questionable.

When it comes to open-source data, there is also a community of open-source tools and techniques that come alongside - why pay lakhs of rupees for a software like ArcGIS Pro, which is marked at a San Bernardino retail price, when you can go for a quick and free download of QGIS? Why not go for coding languages that are meant to make life easier especially in a so-called famously 'poor' third-world country? Though India is one of the fastest growing economies, the dearth of resources especially with respect to data and data collection mechanisms does lag our progress in many aspects, which is not necessarily limited to urban planning practice or education.

Now then, one may ask is how does this help planners, especially as alleged here in the Indian context? The answer to this is simple. With the onset of cheap internet and especially covid, the Indian masses have been, to put it subtly, pressured to be savvy with technology in unforeseen ways. Whether it be zoom for students even in poor households to grocery delivery mechanisms in

more urban and middle class settings. What planners in most cities could do is to encourage online participation for the masses on their own social media pages, where an audience stuck at work or other chores in the same timings as the participation meetings, probably unable to physically attend meetings due to other bindings where getting food on the table is more important: can virtually provide their reactions to progresses and actions taken by planners and politicians from time-to-time, or even in real time. This is not meant to, in any way, undermine the standard process of public participation that is followed rather commendably by many of the corporations and development authorities, but to merely compliment the process in a constructive manner, saving considerable time, manpower and stress in this process. Lastly, something as social media allows people to interact without class divisions and filters, especially when analysed by automated systems: once the names of the tweeters are removed from the dataset for example, there are no businessmen or rich individuals, but just anonymous Jane and John Does, whose say matters regardless of the power they may be able to wield, at the same time as them being as honest about their responses as they can - which for may not be possible in an in-person context.

Yet, there are some essential limitations that need to be understood and addressed: the first thing being that India, or any particular urban setting in the Indian context for that matter, is a multi-cultural and hence a multi-lingual mashup of responses, sometimes this even being multi-scriptual. While most responses on such platforms would be expected to be either in pure English or in local languages exclusively, the possibilities of mixing the two cannot be overlooked, in a colloquial format known as Hinglish or such others. Such data is hard to analyse, even manually. Furthermore, in cities such as Mumbai where the responses are usually in a span of three languages: Hindi, Marathi and English, two primary languages share the same scripts, something which even the automated intelligence would not be able to tell apart, unless there is advanced sorting and manual interference involved. One more issue that could crop up is the issue of ignorance: many traditional corporations may from time to time forget to check/analyse their social media, due to various reasons ranging from lack of manpower to mere laziness, for which, it would be essential to work out a standard regimen as to how these authorities could go about utilising such a resource to its benefit. The baseline is: this work is not cakewalk - but then again, what aspect of a planner's job description is?

In conclusion, this paper shall deal with the benefits and demerits of integrating systems of social communication into urban planning and go over the possible avenues to set up such a system and make it into a complimentary tool essential for reaching directly and tactfully to the end-user from the planning authority and vice-versa. Further criticism of this work will be always appreciated for a continuous discourse.



SMUS23_13

**Discourse Analysis, Historical Analysis
and Biographical Research: Multi-Method
Approaches in Interpretive Empirical
Research**

Session Organisers:

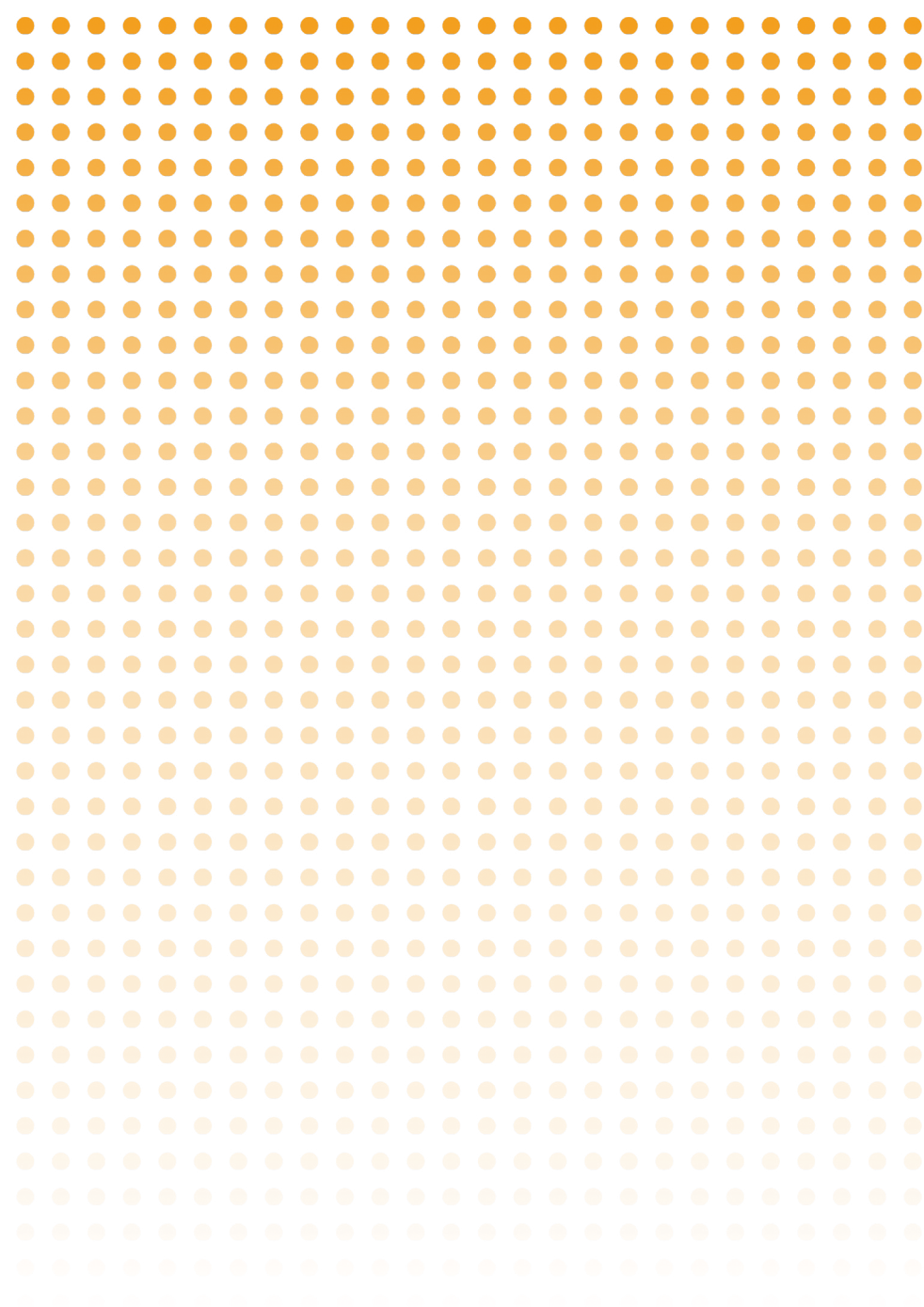
Maria Pohn-Lauggas

University of Göttingen

Ishmael Boampong Osei

University of Ghana





01

The Challenge of Doing Discourse Analysis of Postcolonial State from Zero Point to the Era of Deep State

Keywords: Postcolonial; State; Discourse Analysis; Methodological Challenge

Dominggus Elcid Li ¹, Akshaya Kudale ²

(1) IRGSC (Institute of Resource Governance and Social Change), Indonesia

While the idiom of postcolonial has been used widely, and discourse analysis including genealogy and archaeology has been used by the postcolonial researcher when digging into textual analysis, as part of collective work in series of workshop among researchers to find and to identify different historical ruptures of social justice, I argue that different periods represent fundamental challenge in doing discourse analysis. The problem in implementing discourse analysis on different period s is related to the existence of text, identifying main actors, and finding main logic represented each period in particular in the period of deep state.

Using Indonesian context, as an empirical field, to divide different periods of state power which is strongly connected to global cartography of power in the last 200 years, from the period of state colonialism from Europe in early 18th century to the decline of American hegemony today, I find that the period of pre nation state to the end of Cold War are easier to implement discourse analysis, but the period of post-cold war period which is identified with the end of corporative state (1999) does not provide researcher with key texts to be analysed.

Some researchers may say that is the period of neoliberal period as period of uncertainty which could not provide researcher with certain key text and also main actor as symbol of strong agency. However, the challenge to do discourse analysis on postcolonial context is not only on how to explain different construction of text, but it is also related to understand the new construction of power within state among institutions, in particular how shadow state operates. The construction of the so called as deep state in this new terrain has caused a real challenge for researcher to find the key text and also the key actor to do comparative discourse analysis.

Assessing the context of independence, social justice issue, and sovereignty of the new states emerged in post-World War II could be done through a systematical analysis on state documents in post-colonial period, but we are struggling to identify the key text when dealing with deep state. If in the past the challenge is related to do the discourse analysis on different corpus of period, in the era of deep state, the key text remain unknown to public.

To answer this challenge, the researchers combine different methodologies for instance by doing combination of discourse analysis, spatial analysis, historical analysis, statistical data, different autobiography and biographical work, and reflexive sociology to provide temporary answer for a comparative analysis of these three different periods of postcolonial state. This step is a temporary alternative to overcome the methodological challenge faced in doing discourse analysis in post-colonial period.

The challenge for postcolonial researcher is located their struggling to use same word for different periods. For instance, different words for state politics for the early postcolonial period which exist as state fundamental principle have different meaning to today's readers. The word such as people,

and sovereignty, from the state constitution have no empirical evidence, but it is still widely used as element of tradition or performative speech for state elites or people on power politics. To overcome this challenge the notion of negative dialectic is also employed.

The divisions of postcolonial era in Indonesian context: (i) the period of first independent leaders (1945-1966), (ii) the military and developmentalist regime and cold war (1967-1999), (iii) the reformation period as the period of uncertainty (2000-today). If the text produces by the leaders on the first two periods tend to be more confident and more authoritative with the presence of strong leaders, the last period is represented by the condition of lack of authority within state and its institutions. The era of deep state also represents the condition empty authority and also authoritative text on the period uncertainty. This is strongly connected to the globalization of financial power, the wither of state, the presence of new democratic political system under the control of market players, and for sure, the existence of deep state which currently hijacks the democratic system. Doing discourse analysis on the era of deep state needs to be combined with investigative method as developed in journalism to open layers of actual actors in order to find text and to define context in order to generate meaning.

02

**A Necessary Multi-Method Approach for Analysing Socio-Historical Power Processes in
The Paraguayan Chaco from Indigenous Women's Perspective.
A Biographical and Discourse Analysis**

Keywords: Indigenous Women; Paraguayan Chaco; Biographical Analysis; Discourse Analysis; Multi-method Approach

Victoria Taboada Gómez ¹

(1) Georg-August-Universität Göttingen, Germany

In this paper, I will address a concrete methodological problem regarding the combination of multiple interpretative methods along an empirical example from my doctoral research. For my research, I focus on the biographical analysis (Rosenthal 2004; 2015) of indigenous women's self-constructions and discourse analysis (Keller 2005) of different figurations of indigenous and non-indigenous people in the Paraguayan Chaco, embedded in long-lasting historical processes. Here, I seek to reconstruct how discourses and indigenous women's biographical accounts intertwine in the power dynamics of each figuration (in the sense of figurational sociology by Norbert Elias (1994; 2001), understanding how indigenous women develop strategies to position themselves facing a context characterized by a historical dispossession of cultural and natural resources from indigenous groups and the nationalist, colonial discourses that legitimize it.

In my research I deal with three contexts and case studies that give account of different figurations currently taking place in the Paraguayan Chaco, a semi-arid region with low population density in the Occidental side of the Paraguayan River in South America. In this presentation I will focus on one of them to provide a concrete empirical context where the methodological problem is located. The case's historical background consists of the long-standing occupation of the Central and Southern part of the Paraguayan Chaco's territory by indigenous groups from the Enlhet-enenlhet linguistic family -among others- and the missionary and agricultural-cattle production activities of Mennonite colonies (a religious and ethnic grouping settled in different waves since 1927 onwards) in the same region. Nowadays, the Mennonites run a profitable economy under the cooperatives system, which goes along a strong we-image projected to the non-Mennonite local population as well as to the national government and the rest of the country. In this sense, throughout decades and since the beginning of the interactions with the local indigenous population (including massive baptisms of indigenous and the occupation and transformation of their land), the Mennonites have established a colonial socioeconomic system, where the systematic exploitation of indigenous peoples is a fundamental component (Canova, 2021). At the same time, the case study refers to one of the most numerous groups among the Enlhet-enenlhet linguistic family, with an established use of their traditional language, and with certain access to traditional cultural practices and collective history. Nevertheless, members of this group who almost exclusively live in communities largely managed by Mennonite associations, can barely sustain a self-determined livelihood as they only have access to 2,8% of their original land before 1930 (Kalisch & Unruh 2020). The group's autonomy is severely marked by the current socio-economic regime, including religion and education (Kalisch 2021; Kalisch & Unruh 2022), where the Mennonites -along the compliance of the Paraguayan Governments throughout decades- occupy an established position.

Interview "Interferences" and Living Spaces: Combining narrative-biographical interviews, participant observation and image analysis for a Biographical and Discourse Analysis. Methodical

Challenges

In this paper I will deal with the challenges I came across while combining biographical and discourse analysis (Bogner and Rosenthal 2017; Pohn-Weidinger 2014) informed by different methods of data collection and analysis from my fieldwork in Paraguay during in July-October 2022. Specifically, I will focus on the case of a woman in a leadership position from an Enlhet-enlhet indigenous community in the Paraguayan Chaco. Besides carrying a biographical-narrative interview I also carried participant observation, where the uses of space in the community and the conviviality of modern and traditional constructions in the interview location caught my attention and was a relevant topic for my interview partner. In addition, during one of the interview encounters, family members intervened not only to contribute to the interview but also to show me a particular document regarding the connection of the family history with the Mennonites, focusing on a ca. 1930's photograph. This was only one of the many photographs that played a role in the interview, so that the interaction around the use of them and the images themselves are subject of analysis. In this sense, many aspects can be grasped through the afore-mentioned methods and interview situations: the significance of communities' uses of space and (controlled) access to natural and economic resources of its members, the role of Mennonites in the diffusion of the community's history against indigenous family's narrations and customs, and collective and biographical processes on family history and leadership projects that navigate between establishment within colonial structures, autonomy, and improvement of life conditions; among other aspects. The challenge and at the same time the benefit of such a case is that the relevance of all these aspects require an assessment through different methods, without being able to strictly separate both data collection and data analysis phases (Rosenthal 2018). Hence, remaining open to the requirements of the field becomes challenging and a necessity, even so reflecting on the interview situation and analysing our position as interviewers.

Consequently, the reconstruction of figurations in the Paraguayan Chaco based on the perspective of indigenous women's biographical accounts prompts a multi-method approach to capture all aspects that can shed light to the processual and complex phenomena of indigenous women's positionalities in social relations as outcomes of historical processes, instead of reducing them to fix, essentializing categories. Equally important is that a multi-method approach enables a critical view for understanding historical processes in the Chaco region, which are based on power struggles for natural resources and discourses that legitimize who has the right to them and on what grounds, plus how indigenous women experience this throughout their lives. At the same time, history is a subject of discourse itself: how "the history" of the Chaco region is narrated under nationalist terms leads to the positioning of indigenous peoples as outsiders. These power imbalances are accessible by adopting multiple methods, where discourses play a key role in the intergenerational challenges indigenous women face in the transmission of memory, and in their strategies of leadership to overcome places of vulnerability. More than that, discourses gain relevance whilst embedded in a biographical analysis as well as a sequential analysis of the interactions in a social space and images (photographs) that are meaningful and even necessary for interview partners to give account of their lives. Against this background and based on the experience of my recent fieldwork, the present paper aims at contributing to this session's discussion on combining different interpretative methods throughout the research process.

03

Combining Autoethnography and Narrative Inquiry to Explore Vietnamese Japanese Teachers' Experiences and Identity

Keywords: Autoethnography; Narrative Inquiry; Teacher Identity; Vietnam

Ngọc Hồng Nguyễn ¹

(1) Tokyo Metropolitan University, Japan

Research on non-native language teacher identity is overly focused on individual instructors and their teaching works but ignores the larger cultural contexts in which they work. At the very least, in the research of Vietnamese teachers, disregarding cultural backgrounds may lead to mistakes in the use of theory and methodology. For example, misunderstandings concerning Vietnamese conventional teacher identity and identity transmission through teacher-student relationships may result in misinterpretation of teacher identity and related problems. So, how do we gain access to research participants with different cultural backgrounds?

It is easier if the researcher is also indigenous and lives in the community of research participants for a long period of time aside from the main research. Researchers might use autoethnography to reflect on researcher's experiences and explain them by seeking out all relevant indigenous theories about Vietnamese teacher identity, such as:

1. The Vietnamese teacher was free to select (advance to become an official politician, retreat back to teaching). However, they are always both a teacher and a politician. When many teachers comprehend the country's difficulties, they do not hesitate to propose ideas to help the country.
2. In Vietnam, the teachers was regarded as "the more students gaze up, the higher they see, the more you confront instructor, the excellent teacher is" (Nguyen, 2015). Cao (1995) also stated that instructors must be passionate about discovering new things in their souls in order to foster new things in each student, and that simply enjoying their employment is insufficient.
3. Teachers place little emphasis on individual benefits; they recruit and teach both rich and poor students, as long as they want to study (Kim, 1974). Of course, people appreciate teachers and always bring them the most valuable items so that they can live a full life. If the teacher prioritized self-interest, they would be chastised because only persons in the academic environment who have not prioritized solely academic goals prioritize self-interest (Nguyen Truong To, cited in Cao (1994)).
4. Teachers prioritize quality over quantity. Respecting natural inequalities among pupils and individualizing education as a result, they customize the educational curriculum to the student's level of education (Nguyễn, 1957).
5. From a geocultural perspective, Tran et al. (2006) asserted that the Vietnamese with a culture of wet rice have always respected emotion and adaptation. "They identify them as the water element," in other words, water is the basis of Vietnamese culture (Phan, 1998). Trần (1996) has highlighted the advantages and disadvantages of this personality trait. Teachers always work with humans, so these identities must be explored in data collection, and because foreign language teachers have access to various cultures, it is important to determine whether they can flexibly integrate many different thoughts to resolve the problem of conflict of thoughts.

According to my research, teachers are now attempting to retain the traditional Vietnamese teacher's identity as a good teacher to students while also striving to be an effective educational supplier by changing their curriculum and assessment to recruit and retain students in order to maximize profit for their university/school. They are fighting to earn enough money to provide for their parents and children in order to be considered a good daughter/mother. They aim to be GOOD from every perspective, which is difficult given the conflict between business and morality. They recognize that they cannot act as firmly as traditional teachers who could see personal morality as not conflicting with societal morality because teacher morality may now conflict with social expectations.

It can be said that modern teachers' uncertainty as they try to balance business challenges (e.g., recruiting and keeping students, advertising curriculum through media, etc.) and education in the workplace. They do not consider themselves to be teachers who just perform their given professional duties. Vietnamese teachers do not become sentient beings with no spiritual existence who simply obey what is prescribed and asked of them. However, they are confused whether it is necessary to intervene and provide ideas to the manager when the manager fails to recognize, which has an impact on workplace relationships. These confused feeling can be explained by above cultural theories.

Researchers can choose the best method to investigate research topics if they understand indigenous people. Understanding indigenous culture enables researchers to investigate the most appropriate approaches and acquire indigenous knowledge. For example, in Vietnam, people are hesitant to share their experiences and beliefs for fear of being misunderstood and causing harm to themselves or others. They are also concerned about being misjudged. As a result, interview approaches may not reveal real and rich data. However, they may be willing to reveal all of their concealed feelings for the ones in whom they have faith. So it is critical for researchers to become so trustworthy and well-known that research participants desire to access and disclose their tales, believing the researcher is an advisor who can best explain their problems (as above).

Autoethnography (proposed by Adams et al) is the finest research technique for reflecting, analyzing, and telling researchers' stories to research participants in order to build rapport, and narrative inquiry (proposed by Cladinin and Conelly) is the best tool for researchers to come in the lived experiences of research participants. The combination of autoethnography and narrative inquiry results in a data interpretation that is broad and diverse. According to Lyotard (1984), researchers do not investigate the people who participate in the research; rather, they study themselves in relation to the people who participate in the research.

Through the combination of autoethnography and narrative inquiry, the author identified the confusion in identity construction among Japanese teachers in the Japanese education field. This is because autoethnography is a tool for researchers to find study difficulties physiologically. The rich data and outcomes of autoethnography are not only an evocative door in the narrative interview, but also an evocative door to develop rapport with study participants. In addition to the interview, both the researcher and the participants have a lot of discourse to debate about the teachers' experiences, identity issues, and how to overcome them. This approach resulted in the repeated exploration for relevant theories. For example, the researcher explains the growing tendency toward the industrialization of education in Vietnam and other areas of the world by stating that teachers should be viewed as educational providers as one of the key features of the

educational system that is being modified. The demands that industrial society places on teachers and their relevant (children, parents, leaders, etc.) are increasing, but their position is becoming increasingly precarious (due to the worry of the loss of good traditional values such as teacher-student relationship, educational philosophy and ideology, the worry about the competition for teacher capacity when the economy fluctuates, facing the problems of the post-human world...). They are unsure of what their ideal model of a teacher should be (Cao, 1995); for example they is unsure whether it is preferable to keep close relationship to student and teach them a lot beside Japanese, or to work only as much as they are paid. Teachers become anomies - confused in identity formation - as a result of the rapid transition from agricultural to industrial thinking and values (Durkheim, 2002). In a society that is no longer simple, unidimensional, or unidirectional, teachers must also deal with the issue of constructing an identity in the postmodern world (Lyotard, 1984). To put it another way, the struggle in identity construction that Vietnamese educators are experiencing is a problem that cannot be effectively articulated or rectified. However, other scholars have challenged these methodologies. To begin, methods of collecting memoirs face a challenge because people constantly remember and forget (Jörissen & Marotzki 2008); forgetting is not only individually determined, but also socially framed on different cultures of remembrance (Kohli 1985) to determine what can or should be remembered or forgotten. It is always interplay with the mechanism of forgetting and remembering, and individuals are unconscious and subjective, and as a result, the memory is produced again and again.

To access and include forgetting into memoir research, longitudinal research and the historical method are employed as approaches to obtain the immutable knowledge. Memory work (Stephenson & Kippax, 2008) is used to investigate all notable data; and individuals are continually changing and learning, so it is critical for academics to understand their change point and how they change the way they think/recreate their experiences.

04

The Language and Discourses of Real Estate Agent Promotion and its Consequence in the Real Land Use of the Urban Sprawl: the Case Of Trelew, Argentina

Keywords: Real State Agentes; Trelew, Midde Sized Towns; Urban Planning Tools; Argentina

Mitchell de Sousa ¹

(1) Technische Universitat Berlin, Germany

In a territorial context where, micro economically speaking, the city tends towards suburbanization, in which the city sprawls towards the zoned rural areas as we speak, and macro economically, the private lots, the private property became a complex exchange value. rather in a set where the capital forces of labor are not only subjugated between the labor forces and firms but also in the territorial relations of power. Therefore, the owned house, the owned lot specially considering that “land value is not a depreciate asset”. In a monetary economy, where the foreign currency is the transaction means to sustain the value of a property, both the Land’s assets as well as the value of it in the foreign currency becomes “investment saving assets” and is therefore, exchange value of the private property over the exchange use of it.

Both the effects of creative destruction of the old Keynesian state (as well as the modeling of new forms of neoliberalism institutions) and the weakness of the centralized political structures (specifically in countries, such as Argentina, who have historically been centralized institutional models) permitted for the speculative capital to reproduce “their own set of rules” over the territories to withhold the production of space in cities. The term production is related to Lefevre’s as that all type of circulative economic capital that flows over the city are both represented within the spaces of the city.

Middle sized towns have not only a weight in its concept for being cities that congregates a low set of inhabitants in a cluster but as a role of being intermediate. Intermediate in the sense of being a city that connects the main urban and even global clusters to the area of influence of such in the network of cities (Gorenstein et al, 2012:14)

The city of Trelew, being a middle-sized town in the province of Chubut, is a city whose major and peak urban development occurred in all the phases of the urban effects of the moment of destruction and creation of neoliberalism, according to the timelapse and the processes studied by Neil Brenner and Nik Theodore (2002), and its landscape shows the contradictions of the effects of both occasions in the territory. Constitutionally and historically, the municipalities in Argentina were gradually acquiring autonomy. Firstly, its autonomous doctrine was acquired and then, finally in the last constitutional amendment of 1994, this autonomy was legally consolidated (Paolinelli, 2014:85). Before the amendment, the doctrine was divided in the whole country whether to consider the municipalities only a relegated and limited power from the provinces that they were or as an autonomous organization itself. Despite that the decentralization of the cities aimed to empower municipalities in their own management of their urban territories, the process of adaptation of this new form of governance did not update with the dynamic flow of the speculative market. Thus, the latter has developed different ways to assert their market over the territory. Their asserted speculative power has their reproduction in two particular sites in the city of Trelew: in the so-called urban area of the city and its peri urban (which comprises specially the zoned urban expansion area of the city, that it is sprawling over its most productive area). These processes

arise the following questions: How Real Estate Markets (RSM), which are the main actors that asserts the private property as a saving assets in the territory, do they commoditize formerly rural properties into urban lots? How do they pressure municipalities to change land zoning according to market interests?

In a failing attempt to contact professionally and academically to certain agents of RSM, this work will otherwise focus on answering the above questions by understanding the means through how they communicate to potential investors and stakeholders, for RSM to successfully achieve on commodifying the proprieties in the territory. RSM uses brochures, for sale signs in the territory, newspaper advertisements, advertisements for sale on their web pages, which are publicly accessible to any user, that builds a discourse, a language to the investors and stakeholders.

The discourse analysis will be built around analyzing both the language and the world-built of the RSM and the value of the land use that the RSM have established over the commercialized assets.

Rural land in the city of Trelew undergoes through the urban multiplier factor, which is the increase of value of a land when it changes from rural to urban. RSM benefits of the multiplier factor in a process that results from: firstly, the purchase of rural adjacent land; the following informal measurement of the land from the rural lot sizes to the urban lots, the selling of such lots through the formal market through the discourses that they build with their resources (brochures, for sale, etc) and after the purchase of some of these lots, RSM pressures the municipality to provide infrastructure to these lands, despite that the zoning might not coincide with the ones allowed for urban expansion.

This pressure of the market of the municipality leaves the latter with little choice of police power, since the surplus that they obtain by converting rural land to urban is a benefit on the short term for the banks of the municipality despite being a detriment of its funds in the long term.

While the whole project is designed and commercialized by the RSM, they would strategically sell certain lots of the project and leave others when the infrastructure arrives. By doing that, they would wait for the provided services and the officialization to be formalized so they could sell their more profitable lots for a value that is considerably higher than the previous sold lots.

The methodology adopted to reach such conclusions is a mixed triangulation of the previously mentioned discourse analysis with spatial analysis and critical mapping using Geographic information systems (GIS). This tool allows to see specifically in the territory which are the fragments of the territory that these types of urbanizations are on the aim.



SMUS23_14

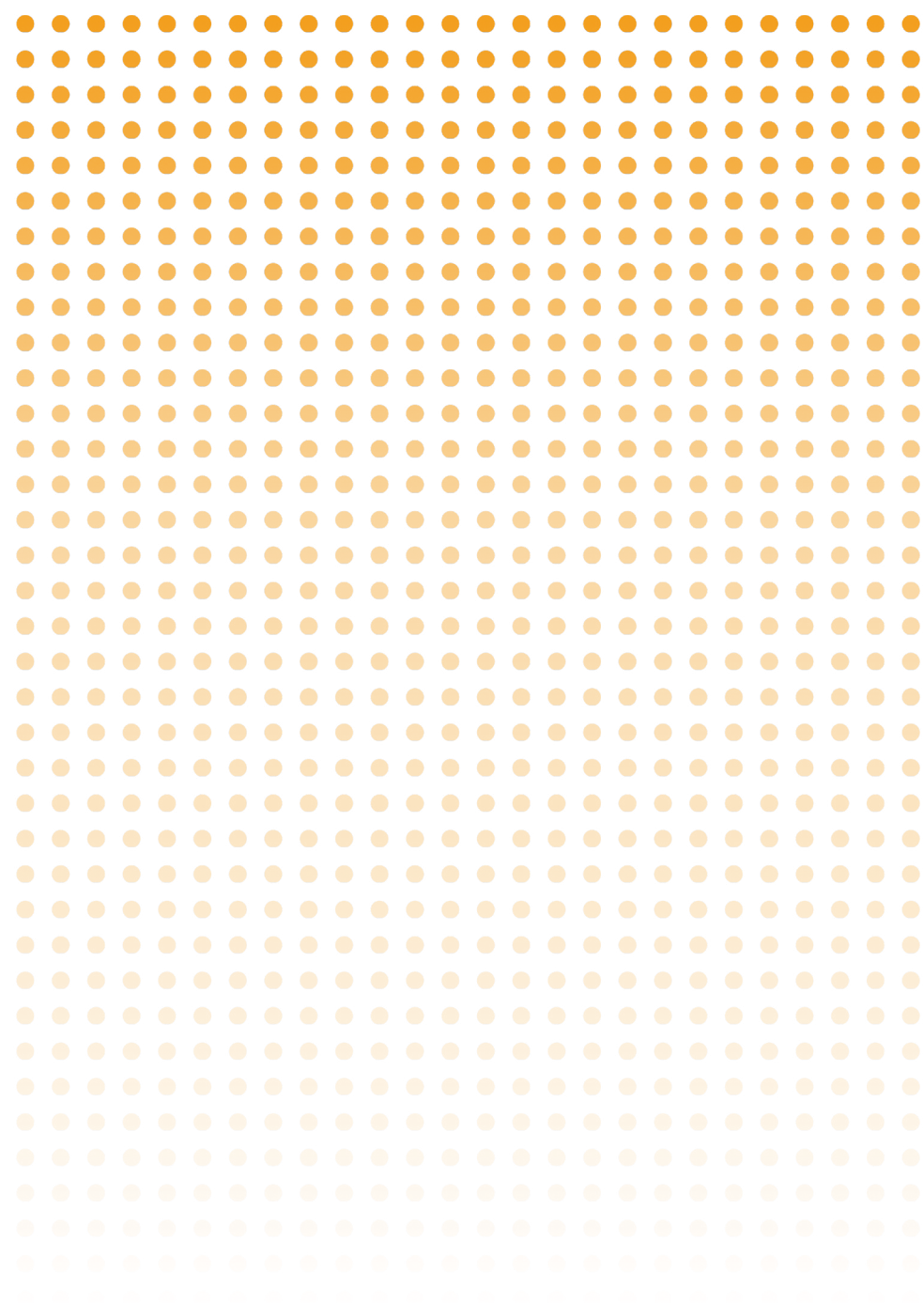
The Individual and the City: Urban Life Stories

Session Organiser:

Johannes Becker

University of Göttingen, Germany





01

From Classical Sociological Theory to Southern Urbanism: Changing Conceptions of the (relationship between the) Individual and the City

Keywords: Classical Sociological Theory; Modernization; Southern Urbanism; Modern Man; Urban Man

Lanka Adarsh ¹

(1) University of Hyderabad, India

Early (or Classical) Sociological Theory developed - to a great extent - as an attempt to understand and ameliorate the upheaval caused by the industrial revolution. A crucial component of this upheaval was urbanization: mass migration to nascent cities in response to the availability of jobs (Ritzer 2021). This emergent mode of life, naturally, became the subject of much theorization, with the dichotomy between the city and the village being emphasized and essentialised: for Durkheim, society moved from mechanical to organic solidarity - from a society where everyone was a generalist, and the basis of solidarity was similarity, to one where people became specialists, held together by their mutual dependence; for Simmel (1903), the peculiar setting of the city - with its “swift and continuous shift of internal and external stimuli”, and its embrace of the money economy - had produced a very specific kind of individual - “essentially individualistic”, rational, calculating, inter-connected, punctual, precise. Louis Wirth’s *Urbanism as a Way of Life* (1938), sought to delineate - at the outset - the universalistic characteristics of cities, which he found in population size, social heterogeneity, and population density. Echoing Durkheim, he emphasized the “segmentation of human relationships”, the predominance of impersonal contacts, and increasing differentiation (heterogeneity) as a result of increasing population density. Wirth’s main proposition, in my opinion, is that this heterogeneity, alloyed with the compartmentalisation inherent in urban life, would “break down the rigidity of caste lines and complicate the class structure” - a typically modernist sentiment that saw society progressing to an age of abundance and equality.

Modernization theories of the 1950s and 1960s revived and repurposed these essentializing categories, with some key differences: the categories of ‘rural’ and ‘urban’ were replaced by those of ‘developing’ and ‘developed’, the unit of analysis became the nation-state, and most importantly, these theories were applied to ‘ends’ identified as desirable by - and modelled after - the advanced capitalist countries of the West. Produced in the geopolitically fraught environment of the cold war by Western theorists, these theories were used to induce alignment with - and governable subjects for - the capitalist bloc (Alavi and Shanin 1982; Escobar 1994). There was thus a shift from mere conceptual generalization about the urban / ‘modern’ man to an active pathologization of the rural / ‘traditional’ man; it was asserted - at least implicitly - that the man produced in and by the capitalist modernity of the west was better than the man of the global South - held back by the fetters of traditional structures and social formations - and that the latter must pursue a course of action that would produce an individual like that of the former. Alex Inkeles (1969), for example, evaluated the degree of modernization through the extent to which 6000 men over 6 countries corresponded with his “model of a modern man” - a man who was open to new experiences, independent of traditional structures of authority, believed in (Western) science and medicine, was anti-fatalistic, calculating, and showed an interest in the (political) affairs of his community and wider society. Though more than half a century has elapsed since these theories emerged, they remain the dominant imaginary through which most of the population envisions ‘development’ in their cities and countries; the “mainstream approach to global urbanism” operative in much of the

global South thus “takes for granted that capitalism and liberal democracy are natural, ubiquitous norms and capable of overcoming the poverty, inequality, and injustice seen as so pervasive across the global South” (Shepherd, et al. 2013).

There are two main problems with such discourse: their placelessness (in trying to find certain principles that are true for every country within the city of the Global North), and their attempt to understand empirical phenomena in the non-West through the theories and frameworks produced in the West (Bhan 2019). There is a need, then, to investigate urban phenomena in the Global South empirically, and build theory rooted in the outcomes of those investigations. Such research has led to a growing realization that cities in the Global South are markedly (possessing significant empirical consistency) - and perhaps even fundamentally (Schindler 2017, emphasis mine) - different from those of their Northern counterparts, and thus a new paradigm - Southern Urbanism - has to be constructed and deployed to understand and theorize the cities of these regions. If it is conceded that the urbanism of the South is distinct, then it follows that the individuals it partaking in - and produced by - it are distinct too; many practitioners of Southern Urbanism locate the precarity and vulnerability of the Southern resident as a - if not the - key “empirical configuration” of Southern cities (Simone and Pieterse 2017, and Shepherd, et al. 2013 in Bhan 2019).

To build on this dissenting and fundamentally different conception of the Southern urbanized individual, and his relationship to the Southern city, I draw from my fieldwork and experiences in Todakalyanpur (a village in Roorkee), the town of Gopanpalle in, and the public transit system of, Hyderabad. I posit that the ideal-typical notions of ‘tradition’ and ‘modernity’ coexist comfortably in Hyderabad, and in reality, actively aid each other, illustrating this through the prevalence of migrant networks - kinship and community ties anchored in the village, but key in transporting individuals to the city. I argue further that the relationship between the city and the individual varies with time (before and after arrival), and the position they come to occupy within the city. Using certain archetypes (conformant to Simmel’s social types (Ritzer 2021)), I sketch how certain types of individuals are produced as a result of the conditions within which they find themselves; it is these conditions determine the power they have to meet their needs, and thus the extent to which they are able to self-determine who they become. I construct three such social types - the shared-auto driver, the (bus) conductor, and the beggar - and discuss them through narratives and descriptions. Finally, I invert the question, asking if the village, too, produces a certain kind of individual. I find that it does not, substantiating this with demographic data, survey results, and interviews from Todakalyanpur. Though classified as - and possessing all the physical features of - a village, it comes remarkably close to Wirth’s picture of urbanism.

Having established through my own empirical research that Southern cities and their residents do not conform to western conceptions of urbanism, and that even villages sometimes exhibit urbanity, I posit that a more inclusive and subjective way of understanding the subjects of urbanism is through an examination of their material conditions, following the Marxist stipulation that the “mode of production in material life determines the general character of the social, political, and spiritual processes of life” (Marx 1859); the material conditions of a place, city, and/or region determine the mode of social life, which in turn determines the mental life of the individual, since “[i]t is not the consciousness of men that determines their existence, but their social existence that determines their consciousness” (ibid.). Notably, Marx saw the features of the urban / modern man (as recorded by subsequent theorists) as a perversion brought about by the capitalist mode of production. In this light, I analyse - through a Marxist lens - the seemingly anomalous characteristics thrown up by my research.

02

The Memory of the Shelter as a Social Organization: The Ilam Residents' Narrative of a City-in-War (Iran-Iraq War)

Keywords: Memory; Trauma; City-in-war; Ilam

Shamin Golrokh ¹, Sima Ferdosian ¹

(1) *The University of Tehran, Iran*

This research aimed to understand how a generation of a society that experienced war as an urban trauma recalls and recounts the situation. We tried to describe how people describe their relationship with a city-in-war through their narratives. Therefore, the concepts of trauma, memory, and remembering/forgetting are key in this research. Many Iranian cities have been in a traumatic war situation during the eight years of the Iran-Iraq war (1980-1988). Such a situation has been more severe in the cities that were located near the border areas of Iran and Iraq, so the city and its residents experienced the war situation on a daily basis, were a part of it, and were in a position to choose to stay or leave the city. This research has analyzed the narratives and memories of a number of citizens of the city of Ilam who have experienced the war situation in the city and are still living there. Also, in understanding people's narratives of the city's traumatic past, this research relies on the concept of the politics of memory and the intentionality of forgetting/remembering. From this view, each social group interprets the past and events selectively from the perspective of its social world and its values. In this context, the act of remembering/forgetting the past happens from the position of the present, as Huyssen proposed the concept of the "present past". Therefore, knowing the situation of a post-traumatic society is important in understanding how they interpret the past of a place.

One could address the interrelationship between place and memory in the context of Place of Memory studies. According to Pier Nora, memory is usually attached to places that are concrete and physical or to immaterial places such as festivals and rituals. Therefore, the place of memory includes geographical places, historical monuments and buildings, historical figures, and people. Reconnecting with a place can bring back memories. Trauma, of which war is one of its forms, creates conditions in which people experience different memories when faced with them. Trauma is often seen as an emotional shock that significantly harms a person over a long period of time and can have long-term effects such as post-traumatic stress disorder (PTSD), depression, and even physical symptoms. Experiencing traumatic events often disrupts our common perceptions about life and profoundly affects our view of the world. Such experiences create feelings such as fear, panic, and a sense of alarm that remain beyond the actual experience of a traumatic event and are even transmitted from one generation to the next. Obviously, one of the conditions that cause trauma is the experience of war, but on the other hand, forced leaving a place can also threaten a person's mental health by distorting the emotional connection with his living environment.

Memory and trauma both refer to the absence of something. Both are characterized by impermanence, transience, and structures of repetition. But turning memory into trauma unnecessarily limits our understanding of memory, defining it exclusively in terms of pain, suffering, and loss. Some psychologists believe that people provide different interpretations of the same situation or event based on their different conditions, insights, and values. According to their wishes, people pay more attention to the desired parts of the memory, highlight them and push the rest to the sidelines. That is, a person is able to choose between remembering and forgetting a memory. Sometimes

he even expresses it in a different way by manipulating the details of the memory. The politics of memory claims that the people of each age reconstruct memory to serve their contemporary purposes. Today, we consider memory as a way to represent and belong more to the present. After all, the act of remembering always takes place in the present, while its referent is past and therefore absent. Inevitably, every act of memory brings aspects of betrayal, forgetfulness, and absence. Considering the traumatic events of the war, the need for the politics of memory and forgetting is better revealed. It is as if forgetting in the context of traumatic memories such as trauma is a gift that can be used.

In spite of being located near the border and the critical conditions of numerous bombings, Ilam city was never deserted during the war, and the residents of this city created another temporary city by setting up tents in the surrounding nature. As a city in the border region and because of its strategic position in supporting the war zone, this issue has been supported by war policymakers. In dangerous situations and when the possibility of bombardment of the city was announced, people took refuge in the surrounding nature and had temporary accommodation there. In fact, the shelter, which was very important as a kind of space during the war, took on different faces during the years of this war and played a role in people's lives in different ways; in the form of basements, temporary trenches, permanent underground trenches, and gradually on the side of the roads or under the trees and on the slopes of the mountains. In this way, the mountains, which were once the dwellings of the nomadic and nomad tribes on this land, have become their safe places and shelters during the insecurity of the cities.

In this research, an attempt has been made to study the way of remembering the new spaces of the city and their relationship with the city that was in a war situation with the methodology of narrative inquiry. Therefore, this article conducted in-depth interviews with 10 people who, during the war, were between the ages of 15 and 35, married, and had children. All the interviewees lived in the city of Ilam during the war and they are still living there. Through thematic analysis, the study interpreted the narratives of these people from their lived experience in the spaces formed during the war, their story of urban life, and the connection of their individuality with the collective memories of that era. The themes formulated in this research describe the features highlighted in people's memories of the city's traumatic situation. The main theme obtained indicates the escape of people to create a new city in the safe and familiar nature of the surroundings, with the support of strong social ties, which the collective memory of Koch has guided in a systematic way. The results of the conducted study showed that most of the residents who lived in the temporary accommodation recognized it as a new city formed based on the social bonds of the main - escaped - city of Ilam. In other words, social organization was the main force that reproduced the city-in-war.

We aimed to explore a city's history by analyzing biographies and life stories. Analyzing the individual's narratives was the main methodological strategy in the study.

03

Invisible Yet Invincible: Narratives of Resilience among Post-Partition Refugees in India

Keywords: Oral History; Life stories; Faridabad; Partition; Refugees

Rachna Mehra ¹

(1) Dr. B.R Ambedkar University Delhi, India

The upheaval caused by the partition of the Indian subcontinent in 1947 has been researched through the lens of gendered violence, fragmented families, uprooted communities and disrupted livelihoods. This paper will add another dimension to the caste, class and gendered experience of the event by looking at the rural and urban resettlement of the refugees in the post partition period. The states of Punjab and Bengal faced the major brunt of the demographic mayhem of partition of India but the rehabilitation policies and response qualitatively differed in these regions (J.Chatterjee 2007, U. Sen 2018). A comparative approach will be used to estimate this differentiation in cities and towns while settling the refugees coming from different kinds of background. A study of cities like Chandigarh, Delhi, and Kolkata will be done along with industrial towns like Faridabad where the refugees were rehabilitated.

Oral history as a method has come to be recognised as a therapeutic intervention which has empowered the communities to retrieve their stories which would have otherwise been subsumed in the grand narratives of partition. This paper proposes to make a methodological distinction between stories gathered and written oral histories on partition that explain hardiness and survival techniques adopted by the refugees in the face of adversity. It is difficult to sift the methods used in collating life stories are often confused with the techniques used to obtain and write oral histories. There are mainly three kinds of activities involved while taking oral interviews namely speaking, listening and remembering the past. Since recalling is also a creative process, the paper will analyse how to make a distinction between factual information derived from verbal communication to understanding inventive stories which are created to exaggerate or emphasize something which needs to be remembered for posterity. In a similar vein biographies may also possess elements of interpolation which are significant and need further probing.

Oral history as a methodology creates a dialogue between the historian and the narrator through the questions asked and interventions made that finally shapes the account. The technique used in the process of eliciting and analysing the material enables 'ways of comprehending not just what is said, but also how it is said, why it is said and what it means' so the oral history interview is a means of 'accessing not just information but also signification, interpretation and meaning' (Abrams 2016). It not only helps in eliciting information but it is 'a research methodology (a means of conducting an investigation) and the result of the research process; in other words, it is both the act of recording and the record that is produced ...Many other terms may also be used interchangeably with oral history, such as personal-testimony research and life-story research that incorporates both the practice and the output' (Abrams 2016).

It is relevant to bring out historical, anecdotal, biographical narratives in cities and towns created in the post partition period because the idea of belonging to a place and a nation was not organic but had to be created in that period. My empirical research based on Faridabad city in India will discuss how the idea of urban development was intertwined with the rural component through

some government schemes proposed in the period 1948-1952. What impact did the policies have on the intended beneficiaries will be analysed through the interviews taken of the refugee migrants and their children belonging to the next generation. What are the stories that circulate among the migrant families and how to sifts reality from perception in this dominant and universal narrative is an exercise that I would like to attempt in this paper. At a global level, the process of the formation of nation-state borders and citizenship in the twentieth century and its impact on transforming 'translocal relations into transnational networks', as well as 'intrafamilial discussions on the "value" of different nation-states' in the context of Syria and Jordan is relevant for framing this concept (Becker 2021).

The paper is apposite for this session as it will distinguish between how cities of origin and cities of migration affect oral histories and life stories. It will make a comparative study of different cities of resettlement where linguistic and cultural differences are ironed out by sufferings of displacement and a narrative of rebuilding lives through a spirit of resilience. How would biographies or accounts of refugees residing in cities differ from those coming from rural background will be an interesting aspect to unravel through this work. The oral history project in India is closely associated with the partition history. This paper will elaborate on the evolving techniques of oral history which has been impacted by new digital technologies and the growing trend for collaboration on oral history practice and interpretation.

When one uses memory as a source of factual information whether it is individual memory or a collective recalling of the past, there is scepticism if it can be relied upon? Many scholars believe that oral statements represent the influence of a social, cultural and ideological milieu which should be documented alongside. Alessandro Portelli identified some elements that make oral history sources 'intrinsically different' from other historical sources which include orality, narrative, subjectivity, credibility, objectivity and authorship (Portelli 1991). He emphasized that 'oral history tells us less about the events than about their meaning' which does not imply that they do not have factual validity. They might reveal 'unknown aspects of known event' which may not be found in a written document. My proposition is to bring out different narratives woven through storytelling, oral history documentation, individual and family biographies which have come to shape the resettlement process of migrant families. Alongside I will try and capture how communities shape the places in which they settle down. There is a recurrent and nostalgic yearning to recreate the past which is evident in the cultural and communal gatherings of the resettled places. Hence as an urban historian I would like to explore how space, place and a historical event shapes a community and how a particular social collective gives meaning to the place of habitation. Both constitute each other in myriad ways.

04

Home-Making on the Streets of Delhi

Keywords: Street-dwelling; Home-making; Place-making; Laws and policies; Urban space

Khushboo Jain ¹

(1) Friedrich Alexander Universität Erlangen-Nürnberg (FAU), Germany

A motorcyclists' group in Delhi called Ride for a Cause held a bike ride event in Delhi in January 2015 to raise awareness on child beggars, asking people to only donate food to child beggars and not money, claiming money is taken away by the organised mafias who force children to beg for them. When I showed my concern about the ill-found initiative, the organiser came to see me. In the following conversation that we had, I call the event organiser S and myself K.

S: You know Khushboo, there was a case in the High Court of Delhi on organised begging syndicate where the Delhi police falsely reported in the Court that there is no organised begging syndicate in Delhi.

K: But do you have evidence of organised begging groups in Delhi? In my ten years of working with the street-dwellers in Delhi, I too have not come across a single organised begging syndicate. What I have found is that most children who beg on the streets are with families, and are most often with their mothers. Even in the absence of families like in the case of solo children, no one has ever mentioned of a begging syndicate.

S: No, we saw in the movie Traffic Signal how the organised begging syndicates control everything that happens on the streets, from forcing children to beg, to women even renting infants for the purpose.

K: But that's a movie, a piece of fiction! Have you ever spoken about this to either these children or adults on the streets who beg?

S: No, there is not enough time while waiting between traffic signals to have a conversation with them.

The movie in question above, Traffic Signal (2007) has repeatedly come up as a store house of information on the lives of urban street-dwellers in most of my conversations with the middle and upper class in urban India. For people outside the country, the reference point shifts to other movies, Slumdog Millionaire (2008) or Lion (2016). The common stereotypes generated and represented in all these movies are that the begging mafias on the streets of urban India maimed and organised children for begging, and that the streets are a space of criminality. Unfortunately, these images from movies create negative perceptions of people living or working in street spaces. Most people internalise these perceptions rather than have a conversation with the population in question to further their understanding about their lives.

Contrast it with statements like these:

“Yeh din mein drawing room, sone ke time mein bedroom, khane ke time dining room – apne iss ghar mein sab cheez ke liye kamre hain!

During the day, this is the living room, bedroom when we sleep, dining room when we eat. In this home of ours, we have rooms for everything!”

Statements like this one made by Binod and his family members who lived on a pavement in New Delhi baffled and intrigued me for a long time. As they jovially pointed towards their regular dwelling spot on the pavement, to an area not measuring more than a few square feet with bare essentials—a handful of clothes tied in a bundle, a tattered bed-sheet untidily spread out on the floor with some utensils stacked on one side—I would wonder what makes the streets home. When children and young persons in the railway stations asserted ‘station hi hamara ghar hai (the [railway] station is our home)’, I wondered what the components of such home-making on the streets and the stations were. These statements not only transgressed my middle-class notions of home being a four walled structure – a ‘private’ space where one lived with kin and received care, protection and support—it also challenged larger discourses around street children and the street-dwellers—that the streets were a wretched place to live—and therefore these people needed to be rescued.

Talking of rescue, there are global and local prescriptions on dealing with the ‘problem’ of homelessness. And none of it looks at the space of the street as ‘home’. This work therefore is an attempt to fill this void and offers a detailed, ethnographically rich sentimental narratives of the practices of home-making on the streets of Delhi. Through the lived experience of street dwelling population, this research offers a critique of the concept of homelessness, elucidating how policies and interventions designed from the lens of homelessness affect home-making on the streets. I substantiate it with the court room drama of several public interest litigations where the sentimentalized narratives of judiciary around urban aesthetics and of the NGOs on wretchedness of street living in fact compromised the housing rights movement in the country. While the ethnographic research for this study was carried out in Delhi, this work speaks not just for urban India but globally for countries with street dwelling populations.

The three different kinds of space where this research study was conducted had at its centre – places of worship, commerce and a railway station with a large population of street dwellers inhabiting it. Rather than seeing space as merely physical or objective, geographical space has always been imbued with social experience in interwoven layers of social meaning (Lefebvre 1974) . These three field sites were all contingent on people in the way they were using the space and the respective lives of people in, on and around these spaces. These places of worship, commerce and railways are a universe thronged by forms that make survival and home-making in these spaces possible – devotees in places of worship, customers around places of commerce and the passengers in the railways and markets around it. While the commercial activities around places of worship and donation by devotees aids in the survival of street dwellers there, it is the waste generated by passengers and the market catering to passengers that aids survival in and around railway spaces.

However, in the rescue discourse and interventions for the homeless or raids by anti-begging squads, there is no consideration on how “streets” - the space that others see as commonly owned - are sometimes the only empowering option and what closely resembles home for a large population of disadvantaged. Home in the rescue discourse continues to reinforce the perpetuation of a certain sentimental class-based feeling of the “normative” family—nuclear, patriarchal; and in the increasingly surveillance centric world, being traceable/trackable is part of the new normative – people on whom surveillance can be performed, controlled, indoctrinated, taxed...

In this paper, I address two important research questions. First, how different street spaces become home for its inhabitants and how the material and social space aid in the processes of home-making. This enquiry will lead us to the exploration of how is the private and public space, including the

domestic encoded and understood. Second, how the street as a space of home-making is understood in policies and interventions for street-dwellers and how it impacts the everyday lives of the street dwellers. This enquiry will lead us to the exploration of who defines out of place.

This study was initiated to understand home-making practices on the streets of Delhi, on engaging with how space produces and helps define home-making practices on the streets, and the sentimentality of it all. As this research progressed, so did the idea of the city. Governments changed, the idea of the city changed in the legal, political and civil society discourse and so changed the lives of my respondents living on or off the streets. In the ongoing Covid 19 scenario and the plight millions of workers are faced with globally, this work is a powerful reminder of the consequences of paternalistic attitude, not just of the state but also of the human rights framework, with a call for radical thinking and praxis.

05

The Space-time Matrix of Commemorative Street Renaming in Eastern Germany

Keywords: East Germany; Street names; Commemoration; Critical toponymy; Linguistic Landscapes

Seraphim Alvanides ¹, Isabelle Buchstaller ²

(1) *Northumbria University, United Kingdom,*

(2) *University of Duisburg-Essen*

When ideologies change due to “ruptures in political history” (Arazyahu 1997:481), the consequence is often the renaming of urban features. The recent renaming of streets, schools, army barracks, squares and bridges exemplifies the ways in which seemingly mundane landmarks in urban landscapes can be recruited to inscribe or contest hegemonic power via memorialization in the city-text (Kwai et al. 2022, Okrior et al 2020, O’Sullivan 2018 inter alia). Non-surprisingly, thus, the most vivid turnover in the commemorative landscape can be found at the cusp of changes in state ideology, when a political regime gives way to a different regime.

Research on the linguistic landscape has accrued a wealth of knowledge on the ways in which commemorative (re)naming can be recruited as a powerful mechanism to over-write collective memory during times of political transformations. But the majority of Linguistic Landscape and critical toponymy research is historically and geographically narrow, limited to city centres and focusing on denominational choices in one particular regime or on the basis of a short period of time (Pavlenko and Mullen 2015, but see Tufi 2019). Consequently, while we know a lot about the commemorative priorities that predominate at various stages of renaming, we lack longitudinal and comparative research that would put individual semiotic ruptures into a broader analytical context. We report on a project which explores ideologically-driven changes in renaming patterns in Eastern Europe over the past 100 years, from the end of WWII up until 2018. Our analysis contrasts commemorative renaming in two locations in Saxony, Eastern Germany: a large city, Leipzig, and a small town, Annaberg-Buchholz. This comparative analysis allows us to explore the effect of representational politics versus more base-democratic, bottom up, processes on memory making in the street scape. As such, our analysis contributes a longitudinal and comparative perspective on the ongoing revision of the “ideological robe of the city”, which Zieliński (1994) defines as an inscription of values, historical events and figures representing the political position through monuments, commemorative plaques, names of schools, streets and squares.

Eastern Europe offers an unparalleled case study for transformations in representational politics as a result of changes in state-ideology. Having established their first democracies after WWI, these states were occupied and/or governed by Nazi Germany until the end of WWII. Post-1945, the USSR-aligned countries were ruled by communist/socialist regimes until the end of the cold war brought parliamentary democracy to most Eastern European countries. Unsurprisingly, the rapid succession of changes in state ideology has left its mark on the linguistic landscape of these nations.

As our findings reveal, street names are particularly illustrative of the contested hegemonic nature of the city-text, inscribing official self-presentational narratives which support politically motivated memorialisation. As Tufi (2019:244) argues, such lieux de mémoire (see Nora 1989, consider also Harjes’ 2005:149 “memoryscape”) mark the nexus between identity and memory, contributing to “the linking with and legitimization of national discourses”. While commemorative naming is

thus a fundamentally ideological practice of memory making, tapping into hegemonic notions of a common glorified past, commemorative re-naming can be recruited as a powerful mechanism to over-write memory during times of political transformations (Assmann 2016:22, see Mitchell 2003). By tracing the waves of instatement and erasure of Nazi officials and socialist revolutionaries in the urban toponymy of the past 100 years, our project illustrates the power of commemorative renaming as a mechanism to obliterate the memory of the former regime. The public elimination of “the discredited past from the public sphere demonstrate[s] the end of [one regime] ... and the beginning of a new era.” (Arazyahu 2012:387). The longitudinal perspective of our study brings to the fore the fact that different regimes contribute to a different degree to the influx of ideological names that can be observed throughout the whole century; commemorative naming is an ongoing process (see also Handke 1998, Rusu 2021). Yet, at the same time, peaks of change are followed by periods of relatively little (re-)naming activity as the revolutionary zeal for erasing old and instigating new heroes, symbols and values wanes over time.

The research design of our study is thoroughly interdisciplinary, drawing on collective memory studies, LL research, quantitative sociolinguistics, critical toponymy and geographical information systems. This triangulation of research methods results in the empirically-driven quantitative and qualitative modelling of the ideological processes that continue to shape the Eastern European linguistic landscapes. Detailed spatio-temporal visualisation techniques (Oueslati, Alvanides, Garrod 2015) allow innovative visualisation to identify patterns of renaming practices across the quick succession of regime changes. The mapping of changes in their spatial dimension confirmed earlier observations (Light 2004, Light and Young 2018:189, Azaryahu 2016:64) made on smaller data-sets that streets in the city-centre and the big thoroughfares undergo renaming more often than streets in the peripheral areas and small alleys. Unlike earlier studies, it also highlights the ideological nature of naming of (streets in) new housing estates, which both in the Nazi and the first decades of the communist eras were viewed as symbols of the regime’s strength and efficiency. Qualitative methods build on these findings to provide a contextualisation of the quantitative results through the analysis and interpretation of data collected from mass media and ethnographic interviews (Fabiszak & Brzezińska 2016). As Blackwood (2015:51) points out, “the marriage of [such] methodologies ... is significant since the conclusions ... are greater than the sum of their parts. [By] ... start[ing] with a statistical approach, it is possible to examine more closely the function, authorship, materiality, and target audiences of signs”.

Our analysis treads new ground by exploring street name changes during a century characterized by consecutive waves of political transformation. The innovative interdisciplinary approach to commemorative renaming opens new horizons on linguistic landscape studies by examining the complex processes underlying “relations of power, language ideologies” across a century of political ruptures (Pavlenko & Blackledge 2004:1-2). As such, it allows us to conceptualise renaming practices in a “time-space matrix of long and short historical periods and locations” (Arazyahu 1997:480). We report on our findings and propose methodological guidelines for analyzing street renaming from a longitudinal, transnational and interdisciplinary perspective. The overall objective of this study is to inform our knowledge of the complex ways in which “landscape and identity, social order and power” (Rubdy 2015:2) have been linked via street naming choices across the past hundred years in two Eastern German contexts.

06

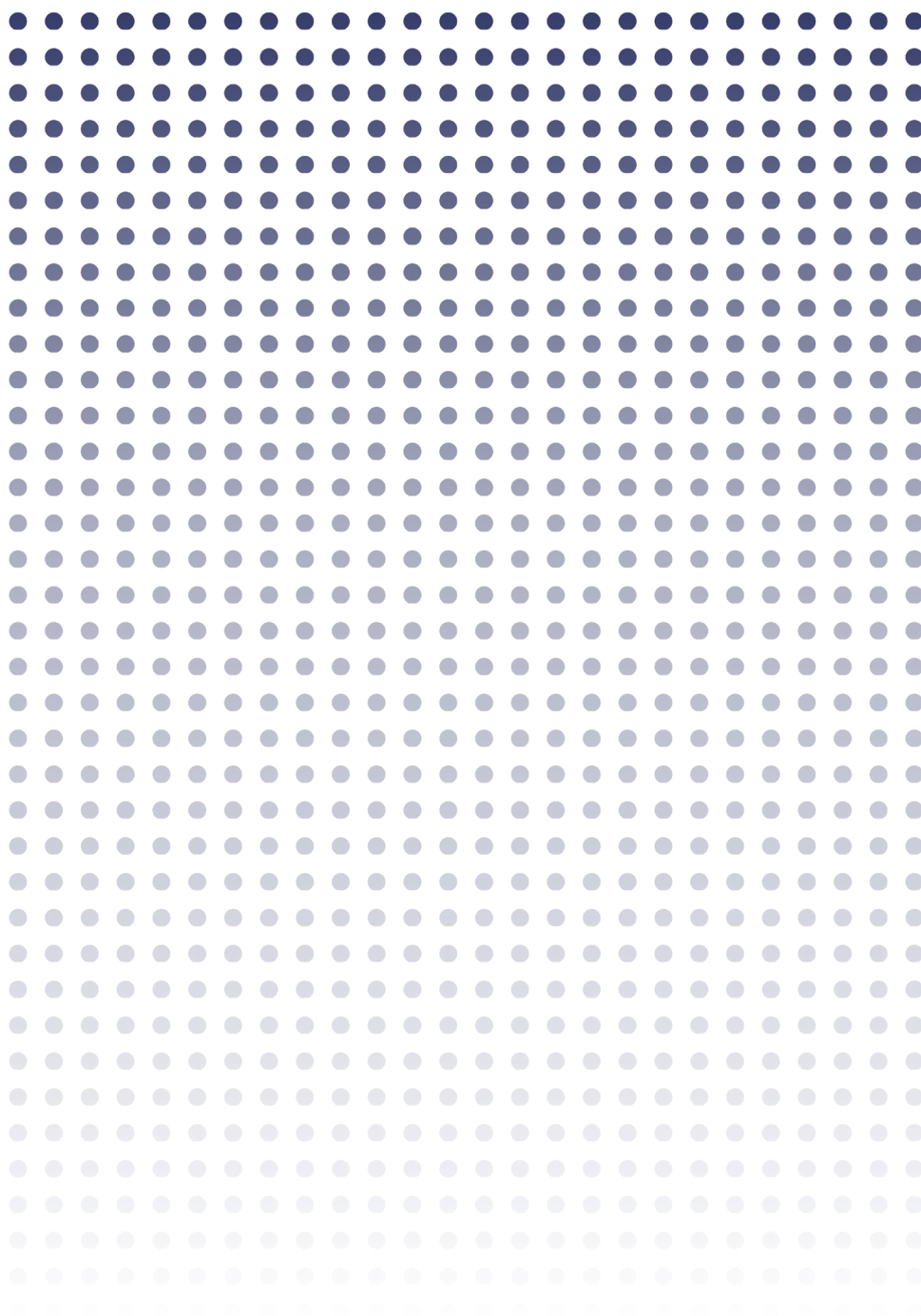
Multilingualism, Mobility and Space in Urban Public Environments in Southern Africa: Reflecting on Methodological Improvements

Keywords: Linguistic Landscape; Soundscape; Urban environment; Multi-semiotic; Rhythmical properties

Victor Chikaipa ¹

(1) University of Malawi, Malawi

This paper argues that the methodology of linguistic landscape studies on urban settings and the construction of other public spaces in southern Africa has refused the privilege to draw from other wider multi-semiotic resources and spatial properties for broader meaning-making. At its inception, linguistic landscape mainly focused on how language constructs a public space with street signs that include billboards, commercial names, place names, street names, road signs, shop signs and public signs as its unit of analysis. It turned out to be the dominant methodological paradigm of studying visible languages, especially the presence of minority languages and multilingualism in the urban environment. Later, the theoretical, methodological and empirical developments in the field led to the expansion of the horizon of research not to exclusively focus on linguistic signs but include their visual material and spatial concerns. However, these theoretical, empirical and methodological developments have failed to make an impact on the data collection strategies especially in focusing on the other material resources, spatial, temporal or rhythmical properties that construct the sociology of everyday negotiations of urban environments of southern Africa. The paper notes that there is much potential for immense interdisciplinary value in the linguistic landscape if southern African research adopts methodological and epistemological approaches that overlap with disciplines such as social geography, urban studies and the anthropology and sociology of diversity. The paper follows theoretical standpoints of space as a complex social construction (Lefebvre 1996) and spatial practices as tactical in nature (De Certeau 1984), and as such considers the urban spaces such as bus stops, motor parks, junctions and highways in southern Africa as contested transit spaces which are predominated by incessant noises from touts calling for passengers and announcing the different bus stops, people in ceaseless motion, bleats of car horns, market vendors fixing prices including loud music from beer parlors. This presents an opportunity to account for the spatial and temporal configuration of the urban environments especially focusing on rhythm and other soundscapes to account for everyday city life. However, scholarship on the linguistic landscape in southern African urban environments still concentrates more on the existing signs or signposts in the cities to account for the presence of a widely identifiable linguistic group whilst temporal and rhythmical properties are of secondary concern. The paper highlights that methodological and conceptual framework concerns espoused from the global north whose city or urban spaces are characterized by clean and tranquil environments have limited the scope of research in southern Africa, especially overlooking and refusing to capture the predominant spatial and temporal characteristic of the city environments. Therefore, the objective of the paper is to propose methodological improvements that can expand further the horizon of focus on other rhythmic soundscapes which are not just forms of everyday life but ‘cultures’ that characterize and define southern African cities.





SMUS23_15

Measuring Change in Urban Space(s)

Session Organisers:

Alice Barth

University of Bonn

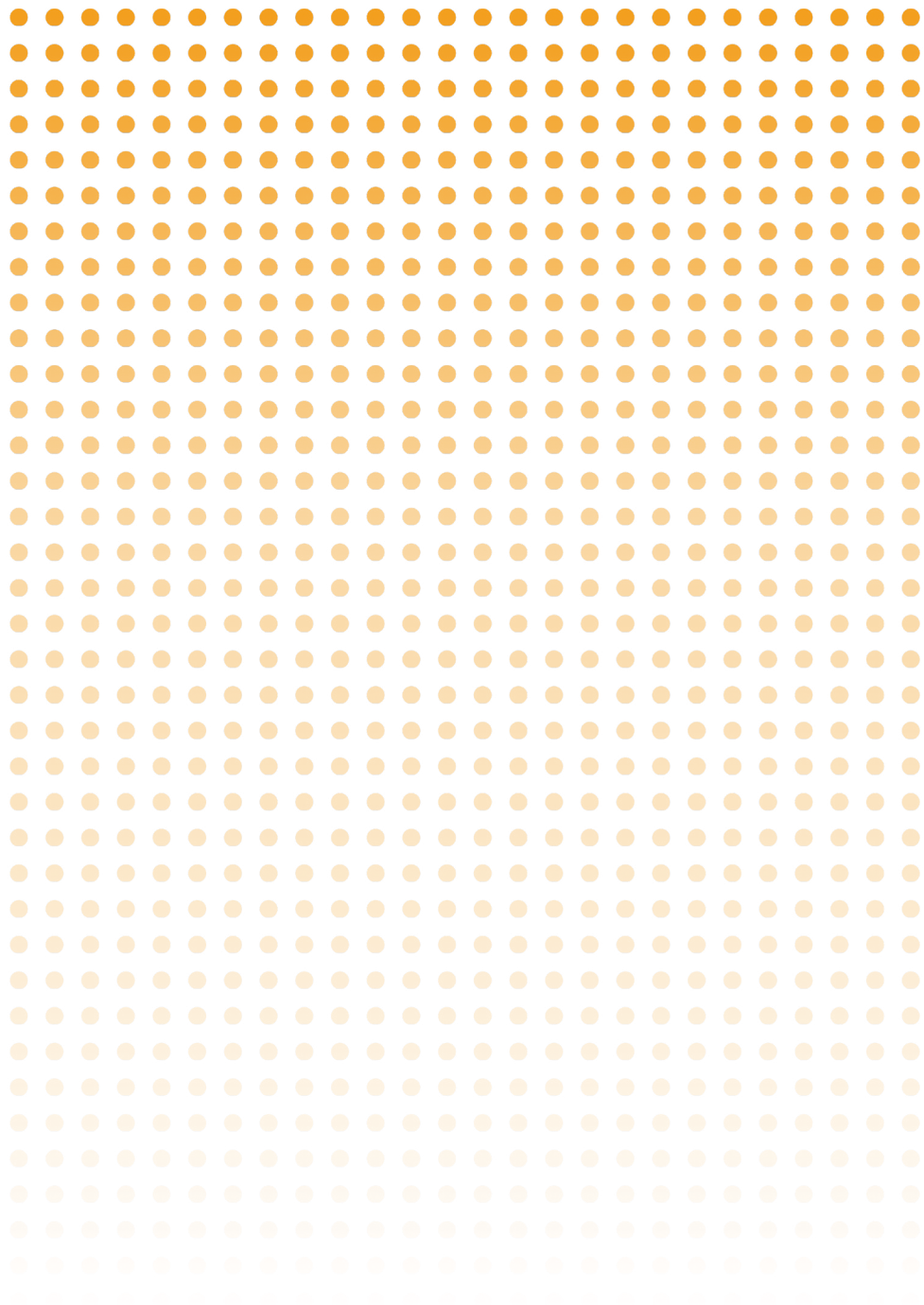
Rebekka Atakan

Institute of Political Science and Sociology, University of Bonn

Manuela Schmidt

Research associate, University of Bonn





01

The Cologne Dwelling Panel – A Methodological Approach to Measure Neighborhood Change

Keywords: Panel study; Dwellings; Neighborhood

Manuela Schmidt ¹, Alice Barth ¹, Jörg Blasius ¹, Rebekka Atakan ¹

(1) Institute of Political Science and Sociology, University of Bonn, Germany

In urban research, longitudinal data is necessary for the study of processes, such as urban development and neighborhood change. Usually, available data are aggregated at the level of certain statistical areas, e.g. blocks or districts, allowing the assessment of change over time in terms of indicators such as average rent price, unemployment rate or age groups. Another important source of longitudinal data are panel surveys, which contain information on individual development and attitude change, but usually covering a large number of areas or even the entire country. Therefore, the number of cases is too small to assess changes in specific neighborhoods, e.g. gentrification processes.

In this paper we present the dwelling panel, a methodological approach that has been designed to measure changes in the neighborhood on the individual-level as well as on the aggregate-level. In a dwelling panel, dwellings (instead of persons or households) are the unit of investigation. As dwellings cannot be interviewed, their residents act as their “speakers”. When residents move out, a new speaker from the household that moved in has to be recruited in the next panel wave. This approach allows for both detailed information about the changes in the composition and attitudes of social groups, and their spatial distribution in the neighborhood.

Starting in 2010, the Cologne Dwelling Panel has been implemented in two neighborhoods in the areas of Cologne-Deutz and Cologne-Mülheim in Germany. In order to re-identify sampled dwellings in subsequent waves, their positions on the building’s bell-boards are noted. In the first wave, data in 1,009 dwellings have been collected, in the fourth wave 747 residents were interviewed. The data collection for the fifth wave will be finished in September 2022. As a refreshment sample, “statistical twins” of dwellings were drawn that resemble the original panel members in terms of location and size. Overall, we expect responses from more than 1,000 renters/owners of dwellings. The questionnaire consists of items regarding individual-level (among others, reasons for moving to the area, attitudes about the neighborhood, and socio-demographic information) and dwelling-level characteristics (such as rent price, facilities, and recent modernization measures).

The dwelling panel provides a useful approach for observing changes in urban spaces, as it allows for long-term comparisons in small spatial units. It has served to assess developments on gentrification processes, changes in opinions about the neighborhood and lifestyles of residents (Blasius, Friedrichs & Rühl 2016; Friedrichs & Blasius 2015, 2020).

In this presentation, we use data from all five waves. Methodologically, we will mainly focus on the construction and maintenance of a dwelling panel across several waves. In addition, we will present some results on the state of the gentrification process in both areas, namely changes in the socio-demographic characteristics of the population, satisfaction with the neighborhood, and the development of rent prices.

02

Spatio-Temporal Analysis of the Urban and Social Fabric of Bombed Cities in Germany: Nuremberg and Essen from the 1940s Onwards

Keywords: Destruction maps; Postwar planning; Spatiotemporal analysis; Spatial inequalities; Quantitative methods

Seraphim Alvanides ¹, Carol Ludwig ¹

(1) GESIS Leibniz Institute for the Social Sciences, Germany

Cities are in a constant state of flux and the different epochs in which they have grown have always left their mark. Territorial expansions, as well as internal change have shaped their evolution and continuity. However, the most significant and rapid city transformations in the last century have been caused, or at least accelerated, by the destruction of war. While postwar destruction, city planning and reconstruction across Europe have been studied extensively in the past, surprisingly few studies have quantitatively explored how bomb destruction affected the long-term physical and social development of cities. Archival research can uncover postwar maps/plans and documented planning intentions, but studies measuring in what way these transformed the city have rarely been conducted. This article contributes to this research gap by employing geographical data science methods to explore how the Second World War bombing of Nuremberg and Essen (both in Germany), transformed the physical and social fabric of these two cities.

To help us better understand the physical transformation of the city, diachronic morphological studies are useful. We draw particularly on a form of townscape analysis which includes a combination of town plan, pattern of building forms and land-use. The town plan comprises of three plan elements: streets and their arrangement in a street system, plots and their aggregation in street blocks, and building block plans. Understanding the spatial patterns and relationships between these elements enables the identification of morphological regions which share unifying characteristics and many studies have utilised this approach, classifying plot typologies, streets, constructed spaces, or open spaces, urban spaces and squares. However, such analyses tend to focus on either the “constants” in the urban environment (e.g. historically persistent elements) or on the relationship between these elements over time and they help to uncover a city’s past and explain development interventions over time. Moreover, an understanding of morphological evolution can answer questions of morphological integration, assisting the historical conservation of cities, as well as guiding their future development. Our methodological approach adopts a plan-based interpretation of the planning strategies to have guided city reconstruction by addressing the following research question: to what extent has the level of destruction caused by Second World War bombing influenced the land-use mix, urban morphology and social fabric of Nuremberg and Essen over time? Our research is set within the context of postwar planning strategies, which have influenced the redevelopment of bomb-damaged cities, and it is underpinned by research and methodological developments in the field of urban morphology.

German cities affected by Second World War destruction had to redefine their urban self-image and undertake a revision of their building stock in the face of the impending or real bombing disaster. Between 1939 and 1949 thematic maps and statistical graphs/tables were extensively used in preparation for decisions to demolish or rebuild after the war. As media for guiding urban planning and political planning processes, they are valuable sources of the urban transformation processes of the time. This article provides a critical statement on mid-twentieth century urban planning, starting from the period of the Second World War, by examining how the early planning visions

and decisions have been imprinted on today's urban and social fabric of Nuremberg and Essen. We take an urban analytics approach in examining post-war reconstruction, with an emphasis on empirically driven research through a quantitative analysis of historical and contemporary thematic maps and socioeconomic data of the city's urban and social fabric from the 1940s onwards.

As two of the most heavily bomb-damaged cities in Germany with around 90% of their historic city centres destroyed, Nuremberg and Essen provide excellent examples to explore the urban and social transformation of postwar cities. We bring together heterogeneous and under-researched data sets, maps and archival material from the postwar period, and convert urban features depicted in historic maps and scanned documents into geospatial data that we analyse with a Geographical Information System (GIS). We cover the years of reconstruction and explore the effects of this transformation on the later socioeconomic profiles of Nuremberg and Essen, focusing on spatial disparities between the various city districts. We demonstrate how postwar planning decisions have had an impact on today's urban fabric and evaluate these patterns in relation to the socioeconomic profile of the city.

Building on previous historic-geographical approaches, we combine morphological variables of townscape analysis to present four different transformations over time. First, we examine the varying extent of bomb damage across Nuremberg and Essen at the city district level. Secondly, we focus on land-use units, comparing the prewar spatial land-use distribution from 1940 with historical maps of land-use/cover from 1956 and more recent land-uses in 1969. Thirdly, building on the characteristics of urban form, we categorise prewar and present-day urban block typologies to examine urban morphological change. In doing so, we make a contribution towards a new framework for the analysis of postwar cities. We demonstrate how postwar planning decisions made since the postwar period, enable a plan-based interpretation of the planning strategies to have guided postwar planning in Nuremberg and Essen. Finally, we assess the effect of these spatial changes to the social fabric of the two cities by analysing population and demographic changes over time. Providing an alternative appraisal of postwar city transformation, this diachronic research offers insight into Nuremberg's and Essen's under-researched past, which is also of interest to planners and policy makers seeking to improve future cities.

03

Assessment of Experimental Trade-Off Approach to Mitigate Climate Change through Urban Planning Actions Transforming Development Regulations to modify the Micro Climate

Keywords: Planning Parameters; Trade-Off Simulation; Urban Densities; Built Environment Comfort

Sudharsanamurthy P ¹, Chandramathy I ², Madhivadhani K ¹

(1) *Department of Planning, Anna University, India*

(2) *Thiagarajar College of Engineering, Madurai, India*

With the scorching sun heating every hour of the summer days, it becomes difficult to maintain a comfortable temperature without the help of mechanical ventilation. Yet few places even during these times tend to be pleasant, contrary to the other areas. This is due to the play of the local microclimate. Though this phenomenal process is bound with natural process, the effect of urbanization has the capacity to possess the adverse content predominantly. The existing urban planning policies, regulations, and built environment models lack area-specific approaches to control or to reduce the impact of climate change. To witness this, the status of India still grasps 168th position out of 180 countries in the world on the rating of Environment Performance Index 2022. The adoption of Sustainable Development Goals has been taken wisely in various aspect of implementation, but still the ameliorating focus on what the strategies being adopted is still questionable. It proven again the importance of establishment of environmental policies, especially in spatial planning. This Environmental Performance Index also states that countries that have been able to reduce their greenhouse gas emissions have made the greatest gains in curbing climate change. As with climate change, the impact of spatial planning factors concerning the creation or deletion of microclimate is a tedious and continuous process which are very much needed because of evolutionary history on the built environment. Climate Change is associated with various tangible and intangible factors, includes but not limited to setbacks, densities, Floor Space Index and other various components.

Though climate change is correlated with the impact or changes associated with built environment, interaction between densities is one direct planning parameter which influences the effect of micro climate on the built environment. This study attempts to use spatial planning as a tool to identify the role and efficiency of densities in-relation to mitigate the climate change at micro level. This paper deals with the relationship between urban planning parameters and microclimate by identifying various parameters influencing microclimate and evaluating them by stimulation to arrive at an optimum environment for human thermal comfort by using trade-off game policy, to formulate a feasible built environment as a prototype model. a policy for addressing climate change on a smaller scale (as a prototype model). This Trade-Off gaming strategies will be holding different set of sequential rules to play with the movement of built environment activities and thus helps to retain the human comfort on the neighbourhood planning level.

04

Monitoring of Spatiotemporal urban expansion of Delhi using Geomatics Techniques

Keywords: Urban Expansion; Remote Sensing; GIS, Delhi; India

Gaurav Kumar Mishra ¹, Amit M. Deshmukh ¹

(1) *Visvesvaraya National Institute of Technology Nagpur, India*

In the recent years, India has shown rapid growth in Urbanization. The cities are becoming crowded day by day. People from different occupations are migrating from rural areas to the urban centres. The reason for migration includes employment, education and businesses. To control this expansion, it is required to assess the pattern of growth. This paper attempts to assess the spatiotemporal urban expansion. We assesses the Land-use Land-cover change for the years 1989, 1994, 1999, 2004, 2009, and 2014 using multi temporal Landsat datasets. We also do detailed analysis of spatiotemporal expansion and explain the typologies of the urban growth. The type of growth found in the Delhi administrative boundary is: (i) High urbanization in the city core areas, (ii) Moderate urbanization in suburbs, and (iii) Marginal urbanization in cantonment. This study shows that urban land has increased in terms of area whereas agricultural land, grass land and barren land have decreased in terms of area. The highest percentage of net change from one Land use to other has been found in suburbs and village areas to semi-urban centres. Highest contributor in the growth of urban expansion is the growth of areas within municipal limits. Cantonment areas have shown marginal growth in comparison with other areas.

Delhi is the national capital of India. It is situated in the northern part of India. It covers 1483 square kilometres of land and is located between 28.330 to 29.00 N latitude and 76.830 to 77.330 E longitude. According to Census 2011, Delhi's population is 11,034,555, but the decadal growth has dwindled from 51.45% in 1981–91 to 47.02% in 1991–2001 to 11.2% in 2001– 2011. The overall population density of Delhi has proliferated from 9340 persons per km² in 2001 to 11320 persons per km² in 2011, which is the highest among all other Indian states/UTs in India (Statistical Abstract of Delhi, 2014). From 2016 to 2030, Delhi is projected to outperform Mumbai in terms of growth, with GDP rising by 7.1% and 5.7% per year respectively (Global Cities 2030, 2016).

During the early 1990s, the economic liberalization has brought out change in policy that contributed to widespread urbanization in India. For analysis and mapping purpose of Land-use Land-cover Landsat images are often used. These datasets are useful because it provides medium resolution having long-term archive with consistent spectral and radiometric resolution. The Landsat mission is the longest running program to acquire satellite data of the earth. In 1972 the first satellite of this program was launched. With the advent of the Thematic Mapper instrument onboard of LANDSAT-4 which was launched in 1982 a suitable spectral (7 bands) and spatial (30 m) resolution was available to study urban growth. Therefore, our study deployed Landsat images of the year 1989, 1994, 1999, 2004, 2009 and 2014 to assess the urban expansion of Delhi. The toposheets for the study area have been acquired from Survey of India. These are projected to Universal transverse Mercator (UTM) projection using WGS 1984 datum. It is further mosaicked and clipped to the study area. These are also used as ancillary data in classification process and for accuracy assessment. The road layer that contains national and state highways was digitized from the Survey of India toposheet. Furthermore, The ASTER DEM version 2 of 30 m resolution was used as reference elevation surface. The population and other ancillary data were collected from

the Census of India and Municipal Corporation reports.

Image Processing and Classification: The study area encompasses 1483 square kilometres of land. The acquired imagery is atmospherically corrected using an empirical image based Quick Atmospheric Correction (QUAC) method. Maximum likelihood classifier is used for the atmospheric corrected imagery in supervised classification. Each Landsat image is classified four classes i.e. Built up, Forest, water and Other.

Land cover change detection: Assessment of land-cover change is essential to understand the patterns of urban land-use and the dynamics of urban growth. Remote sensing based change detection approaches are widely used due to their cost-effectiveness, extensibility and high temporal frequency (Jensen & Im, 2007). While, several change detection algorithms such as image differencing, image rationing, image regression, principal component analysis, change vector analysis, decision trees are in use, post-classification change detection are widely used to assess land-use change in urban environments (Deng, Wang, Hong, & Qi, 2009; Hardin, Jackson, & Otterstrom, 2007; Hu et al., 2007; Jensen, 1996; Liu & Zhou, 2005; Singh, 1989; Weng, 2002; Xiao et al., 2006).

Thus, post-classification change detection is used here to assess land-use and land-cover change. The accuracy however dependent on the accuracies of the individual classification results. It can be approximated to the product of overall accuracies of each individual classification (Coppin, Jonckheere, Nackaerts, Muys, & Lambin, 2004; Stow, Tinney, & Estes, 1980).

Urban expansion matrix: There are three matrices that have been used for quantifying the urban expansion: (i) expansion contribution rate (ECR), (ii) expansion percentage of change (EPG) and (iii) annual expansion rate (AER). These measures were calculated for Delhi. It can be effectively used for explaining the urbanization dynamics.

Spatial urban topology: The spatial urban typology describes the type of urban development based on its neighbourhood relationships. It is a consequence of spatial heterogeneity of various natural and socioeconomic factors like topography, population and market conditions and risk factors such as flooding, landslides (Bürgi, Hersperger, & Schneeberger, 2004; Xu et al., 2007). Understanding the spatial urban typology and its associated patterns in a metropolis is critical in planning for and designing a better and sustainable urban future (Antrop, 2004). In this study, we distinguished four types of urban typologies: i) urban core, ii) urban fringe, iii) ribbon development, and iv) scatter development (Angel, Parent, & Civco, 2007).

To assign a given pixel of the land cover class “built-up” to either one of these types, a circular neighbourhood of one square kilometre around the pixel has been used for the analysis. Urban core is defined here as a high density built-up area having at least 50% of the built-up land in its one square kilometre neighbourhood. Urban fringe is defined here as built-up area whose one square kilometre neighbourhood contains 30-50% of built-up land. Ribbon development is defined as built-up area within 100 m proximity to main transportation corridors i.e., national and state highways with less than 30% of built-up land in its one square kilometre neighbourhood. Scatter development is defined as built-up pixels which have less than 30% of built-up land within their one square kilometre neighbourhood and which do not belong to ribbon development.

05

Approaching Urban Housing with Biophillic Patterns

Keywords: MIG; Open Spaces; Biophillia; Urban Housing; Green

Nitin Kulkarni ¹, Muthaiah Kathiresan ¹, Emline Madonna ¹

(1) School of Planning Architecture and Design Excellence (SPADE), Hindustan University, Chennai, India

Urbanization is phenomenon happening all over the world at various levels from international level to the migration of rural population to urban level. Urbanization - India is a country with lot of diversities, with a population of more than 1.25 Billion people. As per United Nations the estimated population of people in Urban cities will reach 70% by 2050. The growth of the population in urban cities has gone from 756 million in 1950 to 4 Billion in 2014. (United Nations. 2014). India's current urbanization rate of 0.25% will double by 2050 and this rate has kept pace with the annual average economic growth of approximately 8% during the last 15 years. The unplanned urbanization is environmentally unfriendly and unsustainable leading to adverse effects on climate change. The Indian rural population in the view of industrialization, booming economy, better health infrastructure and education in urban cities is looking to migrate to the urban cities for better quality of life. The rural population in most cases enjoys expanse of wide green spread natural vegetation. On the other hand the urban fabric is losing its green with increasing concrete i.e buildings ratio. This poses the question of accommodating needs of the population in terms of both infrastructure and the housing sector. The urban growth pattern on one side is moving towards fulfilling the demand on the other side is losing the connect to the nature. This lack of connect with green (nature) is adversely affecting at the various levels from the climatic to the psychological growth of the urban dwellers. The gap between the both i.e. the lack of green and the urban housing needs to be bridged. The green spaces play important role in establishing healthy relationship in terms of physical, Psychological, emotional and also economic well-being between the occupants and the nature (flora and fauna) especially in the urban residential sector. As per WHO recommendation the required Urban Green Space (UGS) per capita is 9 Sqm and as per URDPFI it is desired to have 10-12 Sqm per person (Source- URDPFI). The urban housing in the current scenario needs to address the issue of the mundane development by having holistic integrated approach that focuses on overall well-being. The objective of the review paper is to understand the relation of green spaces in urban housing and the impact of incorporating biophillic in urban housing. The urban scenario is even more challenging with some parts facing the water scarcity issues. With growing climate concerning issues on uncertain rains the flooding caused as a result of the heavy rains and man-made disaster of unplanned physical growth of city lacking adequate infrastructural support the urban cities are facing crucial water crisis. There needs to be balance between macro level open spaces like Parks, outdoor play areas and the Micro level open spaces at community and individual housing level. Water management plays key role in shaping the urban green and open spaces management.

Bengaluru being the IT capital of India is having major pull factors towards the city. The city with favourable climate throughout the year is promising a better quality of life in all terms. The population influx demands for rapid growth of infrastructure and housing development to meet the rising demand. The city is known to be Silicon Valley of India. This tag has not only attracted the IT professionals to the city but also pulls the labours for infrastructure related developments as the city demands growth in infrastructure. As it involves the macro level planning it becomes

vital to know and understand at the policy level and the short comings at policy level and its implementation. Since the issue is common across the global cities the comparative analysis at policy level helps to identify issues at the policy level and to bring the necessary change. The pandemic on one hand has shown the voids the urban development especially in urban housing. Hence the paper involves the following objectives. To study and analyse how integration of green spaces in urban housing green will bring qualitative change in overall well-being of the users. To quantitatively analyse the policies, statutory aspects of spatial planning related to urban housing with green (Flora) – biophillic considerations. To analyse the aspects related to integrate green spaces for high rise multi dwelling units. To study about the feasibility of incorporating green spaces (Biophillic) in urban housing across different economic groups (LIG, MIG, HIG). The pandemic has demonstrated that the housing is not merely the built walls it also needs to be understood has space which contributes to the physical, emotional and psychological well-being. With the concept of “Work from home” widely being accepted the homes in urban housing need to be just more than built component at an affordable range considering MIG sector. Numerous studies have shown how the impact of ones productivity while working in environment with no access to nature in comparison with the productivity when one is in benefit of natural aspects like light ventilation and visual connection to green. The study is to analyse the approach of the urban housing through the lens of Biophillic. The effort through the study is to establish the strong relation between the occupants, built residential space and nature. In today’s context the experience of being in the nature is either for countryside dwellers in a village or it is only for elite HIG class as luxury element. The study area of the paper is limited to the urban housing. The methodology of the study includes qualitative and quantitative analysis and the literature reviews of journals articles and guidelines relating to urban housing development. This is resulting a void in urban housing is created for affordable class. The outcome of thesis is to bridge the gap between affordable housing and its losing green connects by approaching housing in biophillic way. The methodology of the proposal includes 1. Case studies – relevant case studies were selected based on density, financial aspects and analyzing the biophillic aspects in the case studies selected. 2. Site selection criteria was formulated and based on the criteria the appropriate sites were selected and chosen. 3. Cost Analysis and the implementation of biophillic at various levels. The inferences are drawn at the end of the said studies at all levels. The analysis of the biophillic patterns in both selected examples are done to analyze the 14 biophillic patterns.

06

Patterns of Urban Transformation of Pune City: A Case of 30 Years

Keywords: Urban Sprawl; GIS; Urban Morphology; City Transformation; Urbanization

Urja Rahul Shah ¹, Amruta Garud ¹

(1) MKSSS Dr. Bhanuben Nanavati College of Architecture, India

The world is undergoing through the largest wave of urban growth in history. More than half of the world's population now lives in towns and cities. Rapid urbanization and urban growth especially in the developing world, is continuing to be one of the critical issues of the global change in the 21st century. The concentration of human populations into discrete areas leads to the transformation of land for commercial, residential, industrial purposes. This can cause densely populated centers, as well as their adjacent peri urban or suburban fringes. The process of urbanization has no sign of slowing down and has brought significant changes in the landcover and land use pattern. Pune is continuously evolving, growing and is rapidly developing. Pune is one of the fastest growing cities in India and is known as the industrial and educational hub with the population of 450,000 in 1950 to nearly 8 million on 2021. Most of the cities and towns in India show natural growth rather than pre planned growth and Pune is one of them. Houses constructed in the city hundred years ago have plenty of well-planned open spaces and amenities. But the present situation emerges in contrast to this. In recent times, the picture has changed due to industrialization and tremendous growth of urban population. There is the acute shortage of housing, squatting on public lands, encroachment, uncontrolled settlement increased density in built-up areas, lack of public utilities and community facilities. Once peaceful and green residential areas have now been engulfed by high-rise malls (G.K Hiraskar, 1992). The city has already started to suffer due to increased density of built-up areas and to further prevent this immediate attention and action on the overall urban planning of the city is the need of the hour. The decay is not just confined to the core of the town but rather more to its outskirts. Rapid migration, lack of resources, congested streets, ineffectual zoning, poor planning have all distorted and disintegrated the quality of life in the city. As a result of all this Pune seems to have failed to maintain its much-valued heritage and has lost its charm. If we are to guide the development of buildings in Pune cities better, we need to enter activity into the debate (Oliver and Richard, 1990). The research paper studies the patterns of growth and urban sprawl in the sub urban regions of Pune city. The objective of the paper is to identify the evolution of urban morphology and the land use expansion of the city and to also investigate the past and present patterns and trends of urban growth. The present study aims to address the problem of increasing the urban sprawl in the developing city of Pune. Pune has seen unprecedented growth spatially and economically leading to sprawl. The urban morphology analysis aided by using geographic information system (GIS) and remote sensing technique reveals the patterns and trends of urban growth and settlements. Urban morphology is an approach in designing urban form that considers both physical and spatial components of the urban structure. In addition, urban morphology is the study of the city as a human habitat. It analyses a city's evolution from its formative years to current transformations (Paul, 2008). The remote sensing data used for the study is taken from Landsat-5 and Landsat-8 satellite data. Temporal study of the building footprint data has been prepared using the ArcGIS software to analyze the land use land cover data of the peri urban areas of the city. Statistical data related to the urban density, population growth, migration has also been analyzed. Pune is facing the challenge to accommodate future population and development growth in a sustainable manner. The Understanding of urban growth and interpretation of urban

morphology can be a key challenge to the rapid urbanization of the settlements. The urban morphology study of the city provides information that will enable urban planners to respond to the needs and expectations of urban growth of the city. Urban morphology study can be an important issue and can be taken as consideration in developing a method for expressing detailed design policies (Hall, 1997).

07

Soundscape Analysis of an Indian City (Sonipat) Using SSID Protocol and Regression Models

Keywords: Soundscape; Psycho-Acoustic Analysis; SSID Model; Context

Pritam Lenka ¹

(1) Rishihood University , India

In the world of design, sound is generally calibrated in terms of Noise Maps and decibel levels. The prescribed decibel levels & norms do not take human perception into consideration. Sound needs to be exploited as a Design Resource and how people experience the acoustic environment in context. Hence the holistic word – “Soundscapes”. As per ISO 12913:1, Soundscape is defined as the acoustic environment as perceived or experienced and/or understood by a person or people, in context. As cities become crowded, soundscapes become a global health phenomenon. Getting the right balance is a challenge. The urban soundscape is gradually being emphasized by urban environmental research and is included as an important factor in the urban physical environment. This paper is an attempt to adopt the ISO 12913-1,2 & 3 guidelines from an Indian context and analyse the data thereof. ISO 12913-1: 2014 defines soundscape and put forwards its conceptual framework. ISO 12913-2:2018 prescribes data collection and reporting requirements. ISO 12913-3:2019 gives guidelines for data collection.

The dataset consisting of 200-odd surveys is collected from 3 different locations or environment in Sonipat, Haryana, India. Sonipat is chosen as the testing lab because of its interesting economic landscape of Educational City, National Highway 1(GT Karnal Road) & Industrial City at the one junction. The data collection is based on the reliable questionnaire for soundscape characterization and has followed the SSID Model developed by UCL – IEDE to compute the psycho-acoustic metrics. All the collected data is classified according to the Swedish Circumplex Model of Soundscape Quality Protocol.

These Models helped in characterizing qualitative data into a matrix of Pleasantness vs. Eventfulness. These data are then able to generate several sets of psycho-acoustic metrics which will conclude whether certain psycho-acoustic features are based on location or are independent of location using linear regression models. The paper will be an attempt to measure contextually one of most ignored aspect in an Urban Space– Soundscape through a set of prescribed guidelines and will try to quantify and predict people’s perception of sound in different spaces.

08

Understanding Gentrification in Indian Cities

Keywords: Gentrification; Displacement; Urban Renewal; Transit Nodes; Rapid Urbanization

Rahat Varma ¹, Suruchi Modi ¹

(1) Sushant School of Art and Architecture, India

The proposed talk shall address the concept of ‘gentrification’ in the context of Indian urban spaces and enlist the indicators that are used to spot changes. The term ‘gentrification’ was first used in the 1960s in Britain to explain the phenomenon of people movement based on class within the urban quarters of London. Ruth Glass described this expression as an urban renewal method, and this case found its premise when middle-class / upper middle-class immigrants began to uproot the existing lower-class residents from a neighborhood. This trend was often a result of new investment in dilapidated neighborhoods (Glass, 1964). While the new investment brought with it a face-lift for the area in concern, driving up landholding prices, the cultural fabric of the settlement would alter drastically due to the displacement of the original residents of the neighborhood.

Even though the word was used first in 1964, this phenomenon has been documented in the past. The first example documented was during the rule of Napoleon the third when the French ruler had instructed for a renewal initiative between the 1850 and 1880. The medieval quarters of the city were to be razed to the ground and be replaced by avenues, the public spaces were to be dotted with fountains, squares, and parks thus, changing the public realm forever. The proposed talk will be structured (Methodology) to discuss:

1. Introduction:
 - a. The concept of gentrification
2. Tracing the Origins:
 - a. Review of historic precedents
 - b. Types of gentrification with global examples
3. Contextualization
 - a. Typologies of gentrification found in the Indian context
 - b. Relevance of gentrification in modern urban India
 - c. Results and learnings from pilot study
4. Transit and Gentrification
 - a. Relationship between Transit Hubs and Densifying Neighborhoods
 - b. Parameters for Transit induced gentrification

In the current landscape of urban spatial studies, there is a complete absence of discussion, research, and documentation on gentrification and its impacts in India. In our race to densify and to accommodate the growing economic influx, we are redeveloping areas, creating numerous transit nodes, changing development controls, and neglecting native socio-cultural fabrics. It is important to acknowledge the changes that this phenomenon has on the city, understanding the possible threats of this process evidenced in the western world, and relate them to the rapid urbanization

future of India.

The study is based on the notion of measuring change in urban space and identifying key indicators that can help evidence this change. A city may be understood as an agile organism with connections to both the inside and the outside of it, in a process of existing, this organism changes at both the internal and external level. An urban space's internal structure evolves through time in reaction to alterations in diverse components of the environment. This talk shall discuss the process and impact of gentrification: by identifying tangible indicators from a range of literature and physical studies, both Indian and Global, that can be further researched individually. While the central core of this research shall be gentrification, it will touch upon resources, infrastructure, westernization, inequality, and displacement. The change across these segments due to gentrification will also be a key finding of this research.

While the densification of cities is inevitable, it is imperative to understand that economic pump in areas that are oversensitive to gentrification may cause irreparable harm in the cultural fabric of areas and give birth to gated ghettos. The study aims to develop the basis for a model that can be used to compute the degree of gentrification that an urban pocket has undergone. While the focus shall be on elaborating the interlinkages between 'Transit Oriented Development and Gentrification' in the Indian context, the research shall take cues from the western world to understand the extreme pressure that gentrification and displacement place on the urban fabric. The key indicators shall be plotted to understand what leads to the production of gentrify-able spaces, with an ultimate aim to measure the impact of gentrification in TOD induced settlements.

09

Evolution of Urban Morphological Studies and Techniques of Measuring Morphological Transformations

Keywords: Urban Morphology; Urban Space; Spatio- Temporal; Quantative Techniques

Purba Biswas ¹, Priyanka Dey ¹

(1) Indian Institute of Technology Kharagpur, India

Every city is a complex and dynamic system (Trisciuglio et al., 2021). The city undergoes a continuous process of evolution, where interaction between individual elements gives rise to different attributes. Urbanisation processes are manifested by the change in the physical morphology of cities. Urban morphology is a field that explores the physical form of cities through time and space by focusing on the configuration of urban elements such as buildings, plots and streets. It exerts an important influence on human settlement and focuses on how urban fabric influences urban space over time (Whitehand et al., 2009).

Various factors like social, economic and environmental are responsible for urban form transformation and modification of urban space. Agglomeration of these factors in cities is visible in the cityscape. Therefore urban space is the product of cultural and economic interactions determined by the natural environment and human behaviour (Wiedmann et al., 2012). In current times, quality of urban space plays a significant role in attracting investment and sustaining human resources. The study of dynamic urbanisation processes, such as the formation, evolution, transition and deformation of different urban entities with various functionalities is of utmost relevance (Jiong Wang, 2022).

Over the period, the methodology and literature in the field of urban morphology are evolving. Until the late sixties, the subject of urban morphology was immensely criticised by scholars from various disciplines for only focusing on description rather than collecting empirical evidence (Madanipour, 2001). Previously urban geographers and urban planners mainly focused on the internal structure of the city, building typologies and cartographic techniques by identifying historical elements (Raina et al., 2018). Across all fields, the constant development of technologies, new tools are expanding the availability of openly accessible data and in turn are influencing the consideration of new analytical methods, processes and models in urban morphological studies (Fleischmann et al., 2021). Throughout the 20th century, urban planning and urban geography have incorporated various theories and ideas from other disciplines to understand complex systems better. These ideas reinforce the significance of understanding and modelling the impact of every individual agent or stimuli and the heterogeneity of geographical systems over space and time (Andrew T. Crooks Linda, 2012). For capturing these dynamic spatiotemporal changes, quantitative analysis plays a significant role because it captures divergent agent's actions and helps to measure the system behaviours and temporal outcomes (Ye & Nes, 2014).

This research focused on the evolution of morphological schools of thought from the 18th century to the 21st century. In the 19th century under the British School of urban morphology, the focus was only given to historical landscapes (historico- geographical approach), as witnessed in the works of MRZ Conzen which suggested tripartite concepts- townscape, Burgage cycle and Fringe belts. (Conzen, 1960). Later, between the 1890s and 1950s, Italian and French schools emerged focusing more on physical elements (process-typological approach) over space. Prominent Italian researcher

Gustavo Giovannoni, in his book *Vecchie città ed edilizia nuova*, a masterpiece in the field of urban design mainly focuses on the urban growth and transformation emerging through different geographical situations over time. From the late 19th and 20th centuries, scholars focused more on quantitative spatial analysis like cellular automata, agent-based models, and fractal methods which are a heterogeneous type of analysis. This includes space syntax, which is a contemporary configurational approach for morphological studies.

This study also includes the evolution of morphological studies from qualitative studies to quantitative studies using various models, GIS techniques and open source software like Urban Network Analysis, Metropolitan Form Analysis, Momepy, Foot etc. for a better understanding of urban space transformation due to economic growth. Since the late 20th century the usage of advanced computing techniques for geospatial analysis has been in rapid expansion. In the 21st century mapping, the urban morphology for detailed knowledge of the city structure is directly connected to remote sensing. Major urbanisation processes over the surface can be examined through tangible physical appearances captured on imagery data.

The role of urban morphology was and is very crucial for the urban economy but till the 19th Century, urban morphological studies were not part of mainstream urban planning literature because it is challenging to translate the descriptions of qualitative knowledge into the quantitative analysis (Milojevic & Region, 2012). Traditionally, urban morphology studies mainly focus on urban space features on a different scale. However, it is also essential to study those driving forces which influence the evolution of urban space, structure and the functional relationship of space with other land uses to monitor urban growth direction. Moudon claims that urban morphologists should focus on socio-economic stimulus influencing the city to analyse the continuous transformation of urban elements. Because cities are the product of multiple elements and forms that emerged over a long span of years through continuous developments that leave a footprint on the urban space for the future generation (Onyango Oyugi, 2020).

For studying the advantages and disadvantages of using the quantitative method to measure morphological changes over urban space, it is important to address the problem of only doing qualitative morphological studies. Urban morphology is concerned with the analysis of urban form and needs a shift from traditional analysis to advance quantitative spatial analysis. Therefore, it is important to explore and evaluate the relationship between urban morphology and economic growth using quantitative methods like Shannon's entropy, Landscape metrics, urban intensity, city compactness assessment, urban network analysis, space syntax etc.

The rate of urbanisation and population growth of non-Western countries are rapid in comparison to Western countries. However, most literature concentrates on Western case examples as opposed to identifying morphological transformations in non-European cities. The features and growth patterns of Asian and European countries are too different for comparison (Whitehand, 2012). Therefore studies on Asian cities are required for significant morphological understanding and to minimise the disparity. More emphasis should be given to studying the city's physical form reflecting on how and why cities grow and the evolution of cities using quantitative methods.

An increase in complex urbanisation trends requires new approaches and indicators to analyse urban form, functions and city growth. Therefore quantitative analysis with the trans-disciplinary approach is very significant to analyse or investigate these changes in urban patterns and development processes. We argue that measurement or quantifications of urban elements and urban growth can take place at every scale, predominantly the smaller and more detailed scale of

quantification is more significant to investigate the spatio- temporal growth of cities.

10

Spatial Analysis of Student Zone using Geographic Information Systems (GIS): A Case Study from Dehradun

Keywords: Studentification; Housing; Spatial Analysis; PBSA

Dikchha Tiwari ¹, Uttam Kumar Roy ¹

(1) *Indian Institute of Technology Roorkee, India*

In India, approximately 18% of the population belongs to the age group of 15 to 24, making it the world's youngest. There were 864 universities in 2017, as per the Ministry of HRD. By 2020 the student population was estimated to be 40 million. Thus, the growing need for housing makes Student Housing an emerging rental housing sector. According to the reports from the Knight Frank and CBRE, the industry is expected to grow. The estimated demand for the same is nearly 8 million beds across India, which will grow at around 8% yearly. It is projected to be 13 million beds by 2025, according to the Global Student Property 2019 Report by Knight Frank. It also estimated that the present potential as per the availability of land is 6 million Purpose-built Student Accommodation (PBSA) bed spaces on greenfield locations near the universities, while 2 million brownfield development is to be delivered. Presently, the demand for student housing is mainly met by the unorganized local sectors through rented accommodations, private hostels, and paying guests (PG). This sector is thus facing a huge demand and supply gap, with only 20% met by educational institutes, thus making it a prime choice for investors. Such investments will further require understanding development phenomena around educational institutions for better site selection. Very often, it is observed that around the educational institutes in a city, there is a strong dominance of the student population in the area, creating a zone wherein ancillary facilities crops up which is suited to the lifestyle of students. The phenomena of urban change occurring around universities or a dominant educational institution where housing gets transformed into housing for multiple occupations (HMOs) is known as studentification (He, 2015, Smith, 2008). This change is not just physical but also affects the cultural and social geographies of the cities (Foote, 1980). Western literature has inspected this phenomenon, while limited studies can be observed in the Indian context. Often such areas are neglected in the development plans due to a lack of political will. With private investors' aiming over these sections for providing state-of-the-art facilities in housing through PBSA, there is a need to investigate the urban changes it shall bring about prior to which present trends should be considered.

In context to the above background, the present study aims to provide a preliminary understanding of this broader spatial urban change by addressing the following research questions.

1. What zones develop around the educational node, and how is it different from other city zones?
2. What ancillary facilities develop in these zones which attract students?
3. How has the spatial arrangement in the educational nodes changed the urban area's physical, social, cultural, and economic aspects?

The Methodology adopted for the study is spatial analyses through Euclidean buffers analysis. Spatial analysis solves complex location-oriented problems in decision-making and determines the relationship. It also allows for studying the characteristics of places and the relationships among them.

Dehradun is considered as case city study since it has strong educational institutions roots in its urban fabric. It has a total census population of 569,578 and is known as the 'City of Schools.' It is one of India's educational hubs, embracing many leading schools and colleges in both government and private sector (707 educational institutions). Approximately three lakhs students are enrolled in higher education institutes (HEIs) in the city, calculated according to the intakes. The private investors have also invested in the student housing sector of the city, with various PBSAs like Homie and Stanza living operational in the city.

A query of available source materials and desk research analysis was conducted as a starting point. Data on colleges, universities, and institutes were collected from online portals like shiksha.com, validating with the institute's internet sites listing the intakes and hostel facilities. Secondary data on rent value was documented from online portals like 99acres, Housing.com, and Magic Brick. Google Earth location of the institutes were considered with the digitization of data in ArcGIS. Dehradun is divided in nine zone divisions by Dehradun Development Authority for Zonal Development. These zones were considered for the study. Institutes were then mapped in Arc GIS. The Centre of each institute was marked considering the campus periphery, which was considered for buffer analysis.

With the help of local interactions with residents living in the city for more than two generations, different Studentified zones were identified. Based on this, zones were classified, out of which one was selected for micro-analysis. The zone fell under zone seven of the Zonal Development Plan (ZDP, 2015). This zone falls in the southern part of the city with a total area of 33.42 sq. km, with two significant wards of Turner Road and Bharuwal Grant (OG). The student area developed here is for cluster rather than spread formation. It was selected on the bases of the prominent university named Graphic Era Deemed university, which is more than thirty-year-old. Some of the areas around the university know for the student populations are Subhash Nagar, prem Nagar, and Clementon town.

Further, the institute's ancillary facilities, which included commercial activities like cafes, restaurants, photocopy shops, stationery shops, and provisional stores, were mapped. The recreational facilities of sports were also selected from the geotagged points. Euclidean distance was chosen as a median of the Centre of two Centres of the campus of the university. For analysing the linkage between the two centres, buffer analysis was done. Buffer analysis was done considering the first buffer of radius 500 mt, second of 1 km, third of 3 km, and fourth of 3km to 5 km. Based on that, regularities were recognized, i.e., spatial patterns of ancillary facilities in the zone were studied. The settlement or urban change pattern was analysed based on different variables. These variables were the distance from the institute, significant roads/ transportation corridors, housing accommodation, and rental values. A cross-comparison was done of the zones near the institute with another residential zone relatively away from the institute in Zone 7 of ZDP, 2015. There was a significant difference in the ancillary facilities of the two areas. A significant difference was identified in the ancillary facility of the two zones. These facilities indicated marked differences with respect to area's physical, social, cultural, and economic aspects compared to other urban areas.

The study's findings suggest a significantly higher concentration of ancillary facilities in the buffer zone closest to the institute, with moderate rental prices as one goes farther from the educational institute, the cost of living becomes more elevated, and the number of ancillary facilities drops. Distance from the institute and primary nodes becomes essential for the facility's location.

This study is in cohesion with session 15 of the conference which focuses upon human-spatial interactions in cities and the rapid pace of changes in urban areas. This study highlights the interaction of students with the city and the dynamism of urban change that comes when an educational institute is established. There are marked symbolical change with locals attributing particular neighbourhoods as a student areas. It not just impacts the economic market but also the social and cultural trends in the city, which is indicated by the way of facilities that comes up for the younger generations. Hence holding a strong relevance towards better understanding of the urban fabric. This phenomenon can be observed in every city on varied scales hence leading towards the more considerable argument of acknowledging such change and aiming towards inclusiveness for creating more livable cities.

11

Assessing Urban Safety and Comfort of Urban Public Spaces for Sustainable Urbanization; Case Of Colombo, Sri Lanka

Keywords: Assessment Model; Urban Safety; Urban Comfort; Sustainable Urbanization; Colombo City; Sri Lanka

Janaka Wijesundara ¹, Ahranyakumari Kumaraguruparan ¹, Nimali Aththanagalla ¹, Clarence Dissanayake ¹, Gayathri Kaushalya ¹

(1) University of Moratuwa, Sri Lanka

Sustainable urbanization is a vital aspect of sustainable development. Rapid urbanization has been an inevitable process worldwide due to the increasing population. Currently, 57% of the global population lives in urban areas and scientific predictions show that in 2050, 70% of the global population will live in urban areas. With the expanding population, the demand for building construction and urbanization has risen up. Consequently, numerous social, environmental, and economic issues have been raised. Amidst the increasing urbanization, Sri Lankan cities attempt to accommodate the increasing user needs of the urban population. Increasing urbanization places cities at the forefront of achieving global sustainability. Sustainable development goal (SDG) 11 focuses on developing sustainable cities and communities to make cities and human settlements inclusive, safe, resilient, and sustainable. This demands for proper planning and monitoring methods for urban development to achieve defined goals by 2030. However, the literature review revealed that Sri Lanka and cities in developing countries encounter multiple hurdles to achieving urban sustainability.

Unplanned new constructions and renovations of buildings, transportation services, social interacting places, and associated public utilities added to the existing infrastructure leads to urban congestion. Urban congestion has caused threats to the safety and comfort of users due to climate change, mishaps, crimes, and unauthorized developments. “Unsafe cities of Sri Lanka” is a popular discussion that requires attention from both academic and industrial practitioners. Increasing traffic crashes, annual destructions caused by flooding, crimes in the public realm and unauthorized developments are some of the major urban issues identified within the Sri Lankan urban contexts based on literature and observation. Outdoor public space plays an essential role in shaping urban daily life as being the place for social interaction and various activities, such as commercial, cultural, entertainment, and as well as sports activities. Safe and comfortable urban environments attract people to public spaces.

Therefore, urban designers have a great responsibility of enhancing usability, comfort, walkability, and livability in urban spaces. The cities should accommodate these activities for people by offering more desirable and safe public spaces, thus people can carry out their activities in relative comfort and safety.

The literature review reveals that the above threats affect the users physically and psychologically due to inappropriate design, construction, and maintenance. Therefore, the necessity for careful planning, designing, and execution to create a safe and liveable environment is raised. Achieving urban sustainability has now become challenging in developing countries mainly due to a lack of resources, poor subject knowledge, and scientific background and implementation tools in urban design and planning. It shows that physical, psychological, thermal, and maintenance issues are prevailing in the contemporary urban context. To overcome these issues assessing safety and

comfort is imperative as it provides valid data for urban design, and planning decision-makers. The understanding of the current context drives the decision-makers toward design improvements. This research aims to improve the safety and comfort of the urban public realm of Sri Lanka through a multifaceted model.

- Identify the vulnerabilities of users in relation to public realm design measures.
- Identify/establish the variables to assess the user safety and comfort in streets and public places and the relevant indicators to evaluate urban comfort and safety in streets and public realm and validate it.
- Evaluate the present levels of urban comfort and safety in the public realm by using Colombo City as a case.
- Develop a guideline to minimize the urban risk and vulnerabilities incorporating public realm design measures and management strategies.

The research intends to develop assessment models to evaluate urban safety and comfort. These models are applicable to assess the real urban. Both qualitative and quantitative research techniques were utilized appropriately to achieve the research objectives. Following a mix-method enables the applicability of the research method in order to improve the practical application and validity of the model. Initially, first-hand observations were carried out and key problematic situations were identified in Sri Lankan public realm in terms of urban safety and comfort. Simultaneously, a comprehensive background literature survey was carried out for in-depth studies of the precise constituents of the research.

Streets, civic spaces, parks, and nature-sensitive areas were identified to be the most vulnerable public spaces to safety and comfort issues. The vulnerabilities of user safety and comfort were achieved and a qualitative content analysis was performed to identify the physical, thermal, psychological, and maintainability variables. These variables were validated in the Sri Lankan context by conducting expert focus group discussions with the participation of academic and industry experts with more than ten years of experience.

The measurable indicators of the above-mentioned variables were identified through literature and validated by conducting several questionnaire surveys and focus group discussions. Several questionnaire surveys were carried out with experts and the public to prioritize components of public realm elements, and to prioritize the attributes influencing psychological safety and comfort. The present level of urban safety and comfort was assessed by conducting twenty-two (22) case studies from Colombo City in Sri Lanka representing the main public realm elements as mentioned above.

The study was limited to the Colombo Municipal Council area and suburbs since it is the most urbanized area of the country. Scientific devices such as an illuminometer, gas detector, sound level meter, weather station, etc. were used to collect data along with the physical observations. The assessment was performed compared to the industry norms and practices established through standards, and best practices. The psychological assessment was performed through on-site observations and direct interviews with the users. The thermal comfort assessment was conducted using micro-meteorological simulations using a weather station and Envi-met software employing the Physiological Equivalent Temperature (PET) index to define the thermal comfort levels. Scoring formulas were established to assess physical and psychological safety and comfort, and the maintainability of urban spaces. Explored variables, indicators, and the scoring formula were

validated by conducting local and foreign expert focus group discussions.

The main outcomes of this research include four assessment models under four areas of physical, psychological, maintainability and climatic, a case study evaluation, and a user manual. The benchmarks for evaluated performance of four different areas of public realm also are established. As the generalizability of the models are achieved, these can be used as national-level assessment models to evaluate Safety & Comfort underpinning Physical, Psychological, Thermal and Maintainability criteria. Design guidelines including appropriate standards, best practices, and recommendations for enhancements are prepared for physical, psychological, thermal, and maintainability aspects.

12

Environmentally Sensitive Areas: A Paradigm for Designing Greenway Corridors

Keywords: Ecology; Ecologically Sensitive Areas (ESA); Pallikaranai marsh; urbanization; Sustainable Development

Bhuvaneshwari.R¹, Neethu M.S¹, Nimali Aththanagalla¹, Clarence Dissanayake¹, Gayathri Kaushalya¹

(1) *Vellore Institute of Technology, Chennai, India*

Ecology has always piqued human attention since the dawn of civilization. Even in our ancient scriptures, environmental conservation principles and practices are emphasized. It is now more important than ever for all of humanity to comprehend environmental issues and adhere to sustainable development.

The planet is a gift from our predecessors to us for both our use and for the benefit of future generations. Nature must be respected because she is the most fundamental environmental ideal. Positive emotions that are an expression of pro-environmental consciousness result from valuing life itself and its grandeur, which are both worthy of appreciation. The untouched wilderness, a typical rural environment, a traditional village or town's architecture, and the importance of a historical monument or place of worship are just a few of the things that make our planet beautiful. When we start to appreciate the glories of nature's diversity, it becomes clear that our lives are interconnected with the balance of nature and that humans are only a small part of its intricate web of existence. But over the past few decades, these places have been vanishing at an alarming rate, and the preservation of our environment has become a significant problem. The degradation of the environment and the land has been caused by a lack of ecological knowledge. Additionally, it has caused the extinction and endangerment of other species. Therefore, understanding the environment and living things enables us to defend them against harm and peril. Here, we lay out a roadmap of these developments and list important, frequently interdisciplinary, research issues that still need to be resolved.

Growing interest has been shown in the direct interactions between specific individuals and nature. There is growing evidence that having direct contact with nature can have positive effects on a person's health and wellbeing. It can also help to treat some chronic health issues and lower the need for pharmaceutical interventions. The gap between nature and human beings is closing. Through this paper, the researcher tried to identify some ecological impacts in nature, especially in the Chennai region.

As cities become hubs for foreign direct investment and the country's economic upheaval, urban development patterns in India have gained prominence. For an Indian metropolis of its size, Chennai's metropolitan region features an odd urban form, with a burgeoning low-density suburb and an extraordinarily high and growing population density in the city center. In a study addressing a few zones that were released by the Greater Chennai Corporation in January 2021, it was computed that the GCC area lacked around 45 km of storm sewers. Some of the 45 km of links had to be rebuilt since they were missing, while others had to be ripped down and rebuilt.

This paper tries to probe into the ecologically sensitive areas in and around the city of Chennai and also focuses on the ways to rejuvenate these areas and the need to create a greenway corridor through this urban landscape. This article also endeavors to fill the void between nature and humans. Chennai's urban fabric, which is disjointed and discordant in both texture and form, makes it erotic

for growth and metamorphosis. The real estate industry is compelled to address the housing deficit as Chennai struggles with a dearth of available space. This has caused the city and its boundaries to expand exponentially over time. Our natural reserves and ecologically sensitive areas, including the Pallikaranai marshland, Adyar River, OMR corridor—Perugundi, Pallikaranai, Muttukaddu region, Tambaram, numerous lakes, the Vandalur forest, the Nungambakkam lake area, and the Chetpet Lake, to name a few—have sadly been eaten away in the name of development. Chennai's streets are overrun even after just one spell. As the need for residential space increased, homes were constructed on floodplains and low-lying areas, which caused stagnation. The issue was exacerbated by the disappearance of some of the Pallikaranai marshes. Additionally, numerous stormwater drains that were lacking links caused frequent stagnation, even along important roadways.

This city's Pallikaranai marsh is home to about 700 species of various floral and faunal groups, including fish, birds, plants, and reptiles, like Russell's Viper, and birds like the Glossy Ibis, which is a biodiversity treasure trove. They claim and warn that over the past few decades, Pallikaranai has seen an increase in residential complex construction, in addition to government buildings and a trash yard, and warn that any attempt to dredge the remaining marshland will not, under any circumstances, lessen flooding in the city.

For the last few years, Chennai has been under the clutches of floods after a few spells. During the flood, wetlands serve as sponges. The extra water will be retained and slowly released back into the environment. Such regions are valuable, particularly in urban areas, as their enormous holding capacity will naturally provide flood control.

This paper documents qualitative research by using a case study as a tool to dissect the problems, and for that, the researcher would like to incorporate but not be limited to environmentalists and activists in and around Chennai and also the local inhabitants. For this survey, the researcher has selected environmentalists like Arun Krishnamurthy, founder of the Chennai-based Environmentalist Foundation of India (EFI). The EFI, a wildlife conservation and habitat restoration group, works out of 16 states in the country, taking a community-based collaborative effort, focusing on the revival of freshwater bodies. Another famous environmentalist is Nityanand Jayaraman, is an activist and reporter who focuses on corporate violations of the environment and on people's rights. In this lecture, he explores the blatant encroachment on the poromboke for building construction and waste dumping. Darwin Annadurai is a restoration ecologist who has a strong desire to develop safe havens for a range of environmental issues, leading the non-profit "Eco Society India," a research and action-oriented organization in Chennai that tends to focus on eco-restoration of wetlands (lakes, rivers, and mangroves) and terrestrial ecosystems like the Tropical Dry Evergreen Forest, large-scale reforestation, and carrying out community-based interventions for sustainable results.

The survey permits an assessment. 1. to find a sequitur that the relationship between nature and human beings should have to be more dynamic in nature. 2. The gap between nature and humans should be reduced. 3. Ecological awareness and landscaping should get more significance. The method's application reveals that analyzing ESAs and the underlying landscape elements enables a way to design greenway corridors, which serve primarily as areas for the preservation of water quality and secondarily as pathways for wildlife movement.

Due to urbanization, urban areas are mushrooming and many cities have made efforts to safeguard natural land a priority in their planning. The attention needs despite being a crucial component of

a greenway's visual appeal and biodiversity, thereby providing an opportunity for individuals a chance to stay close to nature.

The research dives into the intricate urban space changes that have impacted the social structure and every aspect of nature. As a result, the study offers a case for conceptualizing and revitalizing these ecologically fragile regions by fusing the perspectives of locals and environmentalists through a qualitative research technique. Additionally, it aims to narrow down the urbanization-induced gap and create sustainable solutions without compromising the needs of any particular group.



SMUS23_16

The Longue Durée in the 21st-Century Social Sciences

Session Organisers:

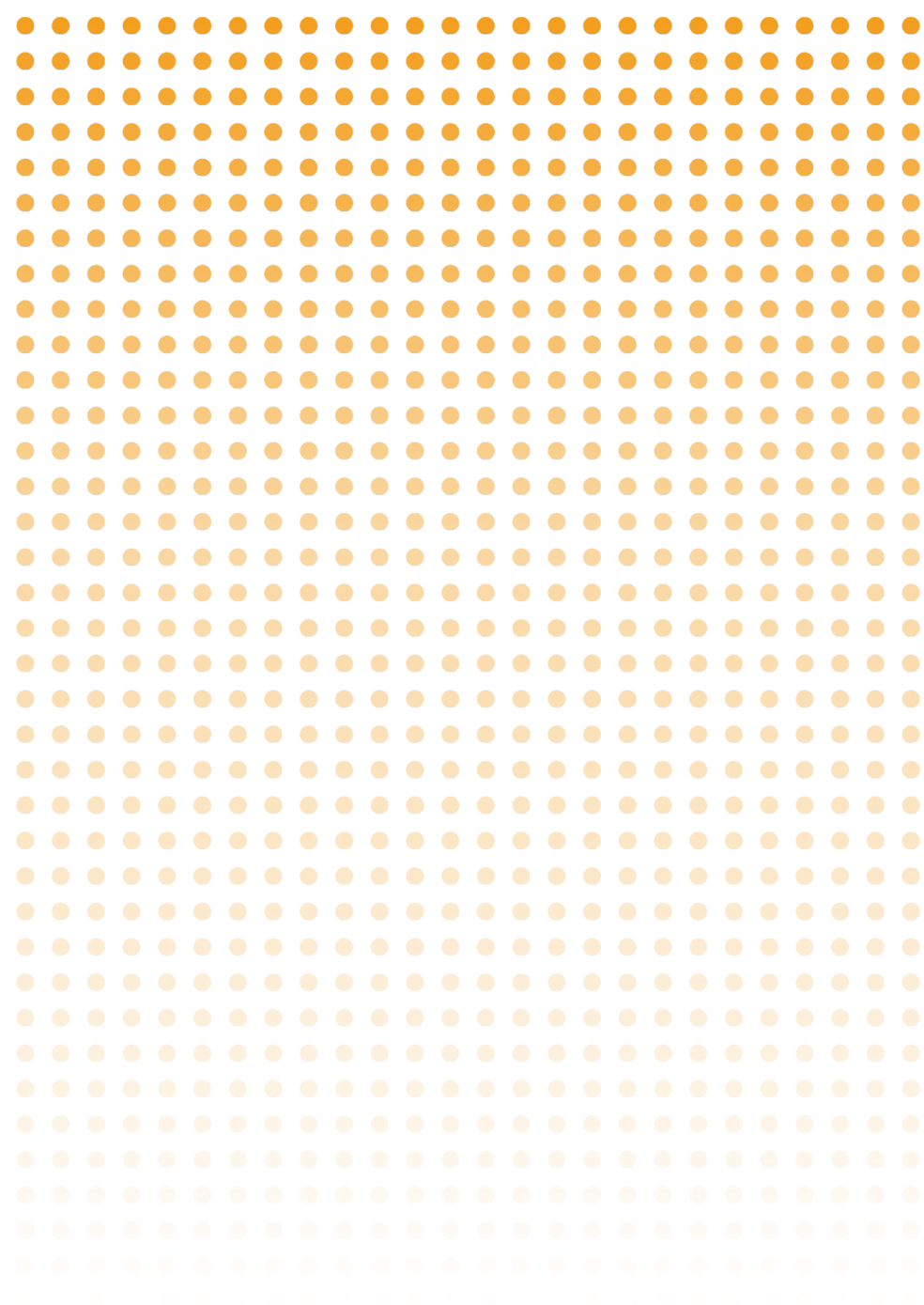
Fraya Frehse

Professor, The University of São Paulo

Nina Baur

TU Berlin | Director, GCSMUS





01

The Longue Durée in the 21st-Century Social Sciences - Methodological Challenges of Analyzing Long-Term Social Processes. An Introduction

Keywords: Social Science Methodology; Epistemology; Long-Term Processes, Longue Durée

Nina Baur ¹, Fraya Frehse ²

(1) *Technische Universität Berlin, Germany*

(2) *Universidade de São Paulo, Brazil*

The paper introduces the session and elaborates the session themes: Introduced by Fernand Braudel in 1958 with the aim of addressing historically long-lasting patterns of social relationships and cultural conceptions, the concept of “longue durée” has since then been methodologically refined. Today and following Reinhard Koselleck’s rationale about the intermingling of time layers (“Zeitschichten”), social science methodology heuristically distinguishes three of these layers. While short-term social processes (“temps court”) unfold in moments, hours, or days, and medium-term processes cover the memory of the living, long-term processes (longue durée) – which are the focus of this session – unfold over decades or centuries and thus go beyond not only the memory of the living but possibly attain temporal moments prior to the Anthropocene age. Since its inception, the concept of longue durée has underpinned historical and historical-sociological research on how past economic, political and ecological processes such as colonialism, nationalization, industrialization, urbanization have been influencing societies even today. This session will tackle the concept’s methodological value, gains and challenges. They remain relatively underexplored, particularly against the empirical backdrop of the (current 21st century) world immersed in apparently irreversible historical changes – for example, if we take into account the onset of the Covid-19 pandemic amidst the socially and environmentally devastating effects of climate change, of the socially unequal global spread of digitalization and the pervasiveness of hybrid wars. The session is receptive to papers that address the value, gains and challenges implicit in the use of the concept of the longue durée in the social sciences in the 21st century by tackling questions such as: Which data and methods can be used for analyzing which types of issues in the longue durée? How to sample and generalize when analyzing long-term social processes with the aid of the longue durée, especially if analyses aims to be delinked and decentered? How can we methodologically assess specific temporal patterns of social change, such as trajectories, cycles or turning points which mark irreversible historical ruptures? How can we apprehend the overall duration, the timing of key events, the pace of processual change and rhythm, and/or how short-term, medium-term and long-term processes interact with one another? How can we assess causal effects when long-term social processes are involved? For example, how do these processes influence and/or explain how societies have been handling e.g. the Covid-19 pandemic, climate change or digitalization, current geopolitics, wars or social inequality, and how can we methodologically grasp these types of relationships? The session equally welcomes papers that address these issues either from a theoretical-methodological perspective or use specific empirical examples.

02

Caste as Cultural Heritage: Contextualising Ambedkar's Views on a Musahar Settlement in Urban Varanasi

Keywords: Space; Socio-Spatial Segregation; Caste, Inequality; Untouchability

Anil Kumar Patel ¹

(1) R.M.W. College, Nawada/Magadh University, Bodhgaya, India

The Indian villages and cities' intrinsic and ongoing socio-spatial segregation has been the subject of research into the dynamics and processes underlying it. The physical and social segregation has a significant impact on subaltern interlocking existence and presents itself in various ways depending on the focus of subaltern living. The structural and dynamic problems appear to be echoed by the spatial axis. Indian society, which is built on the caste system and is the primary source of exploitation, oppression, and denial of civil rights to the lower strata, is notable for its spatial inequality and hierarchical access to numerous societal and natural resources. It is a graded hierarchical structure in which castes are ranked in order of ritual purity and geographical segmentation according to certain customary regulations. The castes were set up physically and hierarchically with the intention of either forcing people into one group or the other.

Anthropologists and sociologists have long investigated village and urban centres as part of their studies. Although there is a tonne of material on the Indian caste system, its socio-spatial, and especially its spatial, components have received very little attention. The socio-spatial segregation and caste inequality raised by Dr. Ambedkar are addressed in the current research, and it makes an argument for the use of loaded concepts of space and society to understand lower caste settlements in urban spaces. Though the relationship between space and society is not explicitly addressed, Dr. Bhim Rao Ambedkar's (1891–1956) socio-political philosophy provides theoretical insight into caste-based inequality and the ensuing untouchability, particularly in his analysis of the socio-spatial segregation of untouchables. He was a pioneering sociologist and widely recognised as the most influential economist and politician.

The study is based on a confined space i.e. a “ghetto” in urban area known as Chhittipur, Lanka in Varanasi district of eastern Uttar Pradesh. The ghetto is resided by Musahar community (a Scheduled Caste, traditionally untouchable who lives at the outskirts of the traditional Indian villages). The residential area of the Musahars is very close to the Banaras Hindu University and is surrounded by various caste Hindu colonies. The residential space of the Musahars, a population of nearly two hundred, is confined to a very small area and is fully devoid of any public or government civil amenities. The paper focuses on the spatial division and cosmological rules of social conduct that lead to the worst forms of inequality and untouchability in Hindu social spaces, mostly drawing from Dr. Ambedkar's writings. The purpose of the paper is to trace the development of caste Hindus and untouchables' socio-spatial segregation within the framework of socio-religious contexts, which led to the worst types of exploitation and oppression in an urban setting.

The paper's major thesis centres on Dr. Ambedkar's critique of caste-based injustice, which highlights the social interactions and socio-spatial patterns of segregation in urban cities and Varanasi in particular. The establishment of the institution of caste derives legitimacy from the Hindu religion and sacred literature, as a mechanism for the coercive and involuntary socio-spatial compartmentalization and “ghettoization” of Musahars in Varanasi's urban setting. The

disadvantages of caste discrimination are internalised and expressed in the formal-informal structures of Hindu spaces, and it is suggested that for Dr. Ambedkar, space (segmented territories) played a vital role in both the persistence and evanescence of untouchability. The paper specifically deals with the dynamics of spatiality and the development of Musahar settlements as “ghettos” in Chhitupur, Varanasi.

The qualitative nature of the paper is supported by secondary and archival sources. The paper’s first section focuses on understanding how communities’ socio-spatial structures interact with one another. The socio-spatial theory of inequality and untouchability towards Musahars is especially discussed in the later portion of the essay and is outlined with reference to Dr. Ambedkar’s writings. The last part of my analysis looks at how Dr. Ambedkar’s strategy was based on the spatial sociology of caste-based inequality and its Hindu religious origins. The paper also makes the case that Dr. Ambedkar’s theories are relevant to present discussions of social and cultural geography, particularly those that measures change in present urban India, particularly in urban Varanasi of eastern Uttar Pradesh. When analysing Dr. Ambedkar’s ideas, socio-spatial segregation and the concept of space are employed to explain socio-historical disparity.

03

Decolonising Archaeological Heritage Management: The Long Path to Inclusivity and Holistic Conservation Approaches in Zimbabwe

Keywords: Conservation Planning Methodology; Decolonising; Archaeological Approaches; Sustainable Practices

Nyasha Agnes Gurira ¹, Mabgwe Malvern ¹

(1) Midlands State University, Zimbabwe

Heritage management is a discipline that is still affected by colonial ideologies, legacies, practices mainly because of its genesis as a discipline. The discipline requires decolonising as it perpetuates colonialism ideologies and philosophies that hinders effective management of cultural heritage in non-western contexts. This paper uses a multiple case study approach assessing how colonialist ideologies and practice have shaped and continue to shape heritage conservation in Zimbabwe. Case studies included Ziwa cultural landscape, Great Zimbabwe World Heritage Site, Matobo Cultural Landscape, Manyanga National Monument to mention but a few. It also assesses the legal and administrative framework for the discipline. Findings reveal that while knowledgeable about the effects of colonialism on the field of Archaeology the practice of conservation planning is still characterised and governed by western frameworks and approaches to heritage management. It also noted that legislative frameworks for heritage management perpetuate coloniality. It is apparent that it still the same old wine only packaged in new skin. Nothing has changed it still separates the tangible from the intangible with an emphasis on importance of materiality, it still separates heritage from indigenous and local communities. Thus it is still non-inclusive and is non-holistic in nature as it fails to capture the context of Zimbabwean heritage. The paper suggests a shift in conservation planning ideology, methodology practice in Zimbabwe to more people centered and context driven approaches. It suggests a more sustainable solution heritage conservation planning models in the country.

04

Investigating and Establishing Inte-relationships between Craft and Interior Architecture: Exploring Conceptual Framework and Historiographical Account as Prospective Methods for Conducting this Transdisciplinary Research

Keywords: Craft; Interior Architecture; Inter-relationships; Conceptual Framework; Historiography

Smriti Saraswat ¹, Gaurav Raheja ¹

(1) Indian Institute of Technology Roorkee, India

This research is based on the hypothesis that there are missing links between craft and interior architecture, especially in India, in the context of current pedagogy; practice; policies; perspectives and paradigms, despite having civilisational archetypes and discourses that prove otherwise. There is a sparse number of studies done to bridge the gap between disciplines like craft and interior architecture (Semper, 1851, 1860-63; Gropius, 1963; Tschumi, 1985), and rare attempts made at opening up a dialogue between them, to wider acceptance and further explorations, especially in India (Thakkar and Morrison, 2008; Thakkar, 2004, 2012; Saraswat, 2017). One of the major reasons for this paucity, is the methodological challenge faced by the researchers, which is posed by cross-disciplinary boundaries. This research is significant, because it goes beyond disciplinarian boundaries, to investigate and establish inter-relationships between craft and interior architecture (Coles and House, 2007). Moreover, it is not easy to reconcile informal approaches adopted by craft-based studies with formal research training, focusing on interior architecture. This research is an attempt in this direction, and is guided by a conceptual framework, which addresses these methodological challenges (Crawford, 2020; Ravitch, S.M. and Riggan, M., 2017). The framework and adopted tools and methods, could enable the authors to explore and analyse craft within the context of space-making (Saraswat, 2018). Additionally, the researchers were able to bridge the possibly missing perspectives linking craft and interior architecture, through historiography (White, 1988) as a tool and historiographical account as a prospective method, which concentrates on studies, which are spread across a longer duration, a few amongst them dating back to several centuries.

It is kosher to design a conceptual framework, for this trans-disciplinary enquiry. The four-step conceptual framework is discussed here:

1. Determining variables and constants for the research – the variables and constants are determined, based on the guiding enquiry and presupposition, which are discussed as follows:
 - Enquiry – craft as knowledge (episteme); craft as skill and process of making (techne); craft as culture and way of life (ontology); craft as a narrative medium (narratology); craft as ornamentation (aesthetics); and, craft as an object of study, in relation to interior architecture (space making)
 - Presupposition – there are missing links between craft and interior architecture, especially in India, in the context of current pedagogy and practice, as well as in the design and formulation of policies associated with these two disciplines or a combination of them (rarely seen)
 - Variables – time; generation; technology; tools; materials; applications; perspectives; processes; and, narratives
 - Constants – empirical knowledge (skill, making); cluster, community, craftperson, guild (maker); gender; culture; and, history

2. Creating an investigative roadmap – the investigative roadmap builds on the following fundamental research questions, underlying the research (not necessarily in this sequence):

Originating Questions

- What are the concepts, definitions and meanings of craft?
- Are crafts linked to space-making (interior architecture)? Are these inter-linkages important?
- Do theories, historical movements and archetypes that link craft and space-making, exist?
- Are they a part of contemporary pedagogy, practice and discourse?

Specifying Questions

- Why is it significant to delve into these inter-relationships?
- Who are the noted theorists and pioneers, whose works focus on this transdisciplinary enquiry?
- Why is craft discussed only in the context of heritage buildings and vernacular design-build procedures, when it comes to interior architecture?
- What are the diverse perspectives on re-interpretation of traditional crafts in contemporary interior architecture?
- What are the methods and tools for investigating and analysing these inter-relationships?
- Are there any systems of classification in place, which showcase the role and significance of space-making elements and space-making crafts, in interior architecture?

Subsidiary Questions

- What is the role of influential schools of Design and Architecture, in creating a worldview linking craft and interior architecture?
- How do buildings tell stories? How do crafts become narrative media for that?
- How do catalogues; portfolios; inventories; and, travel records inform our understanding about the above-mentioned inter-relationships?
- Who benefits from linking craft and interior architecture and why?
- What are the key findings and outcomes of such a transdisciplinary research?

3. Identifying and understanding theoretical perspectives linking craft and interior architecture - the eclectic studies are identified for understanding theoretical perspectives linking craft and interior architecture, focusing on diverse subjects such as craft; interior architecture; design; craft sciences; skill development; process interventions; product interventions; market interventions; management based interventions; policies; digital applications; craft-design collaborations; vernacular architecture and design build procedures; individual communities; material, making and maker; institutional perspectives; research and development; innovation; material culture; history, theory and criticism of maker and making. The researchers then decode and translate various models and codes deduced from different theoretical perspectives, into interior architecture (space-making), with craft being the focus, as structured below:

- 3a. No principal distinction between art, craft, architecture: learnings and reflections from the ancient Indian scriptures
- 3b. Craft and space-making: establishing linkages through concepts, theories and perspectives
- 3c. Craft and storytelling: space-making crafts as narrative media to tell stories about a building
- 3d. Craft and interior architecture: systems of classification - portfolios, catalogues, inventories

4. Identifying the intended audience – this trans-disciplinary research may be of interest to students; readers; researchers and scholars; theorists; practitioners; and, individuals, who represent diverse backgrounds, such as, art; craft; architecture; aesthetics, anthropology; interior design, interior architecture; design; narratology, creative and cultural industries, heritage based studies; cultural studies; material culture; social sciences; history; folklore; indology; research methodology; other peripheral and allied fields; and, simply anyone interested in reading.

A historiographical account is developed, based on the conceptual framework, which brought to attention, critical perspectives and events, linking craft and interior architecture. It showcases the ancient Indian scriptures, texts and treatises, such as *Vāstusūtra Upaniṣad* (translated edition, 1982 referred for this research); *Vastu Shastra* and *Vastu Vidya* (by the 6th century CE, Sanskrit texts for constructing palatial temples were in circulation in India (Lewandowski, 1984)); *Manasara* and *Shilpashastra* (likely in its final form by about 700 CE, or by other estimates around the 5th century CE); *Brihatsamita* (6th century CE), especially chapter 53; *Vishnudharmottara* (cannot be earlier than the 2nd half of the 4th century CE, chapters dealing with painting must have been compiled in the 7th century CE (Kramrisch, 1928)); *Sulbasutra* (written starting before 600 BC and may go back to 2000 BC); *Samarangana Sutradhara* (11th century CE); and many more, which discuss the ancient Indian knowledge systems focusing on art, craft and architecture, and emphasise that there is no principal distinction between them, since the focus is always on the ecosystem of ‘material-maker-making’ (Risatti, 2007), proving that the evolution of Indian art, craft, and architecture (interior architecture) were connected. *Vastu*, craft and architecture are traditionally attributed to the *Vishwakarma* (the all maker or the divine architect) in the Hindu pantheon (K. George, 2003).

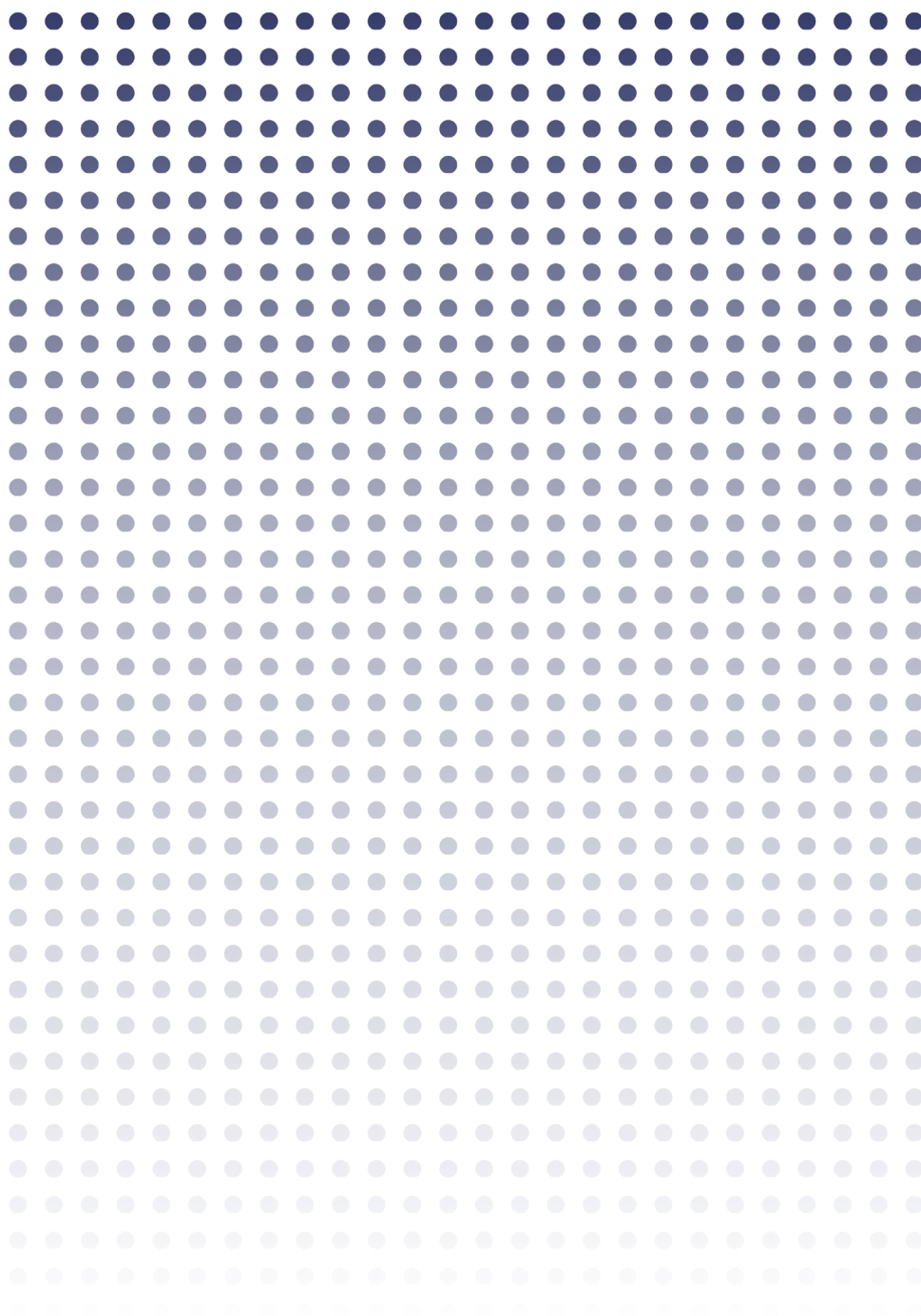
Ancient philosophers have dwelled on the nature of craftsmanship and produced various works on the relationship of theoretical knowledge (episteme) and craftwork (techne). Yet the common view, which mostly derives from Aristotle, is that the activity of craftsmanship is a union of theory and making, because neither of these aspects can be separated from the activity of craftsmanship (Deniz and Açıly, 2017). Craft guilds formed in France and Italy (12th century CE) contributed in every aspect of life through the knowledge of materials and skills of making. Similar guilds could be seen everywhere in the world, which gradually reached their zenith (14th century CE). Mughal architecture and interior spaces in India, is the pinnacle of stone craftsmanship (early 16th century CE to first half of the 19th century CE). A retrospective view on the global modern history also reveals that craft and architecture appear as particularly tight-knit. Art and Craft Movement (1880-1920); Ruskin’s and Morris’s Insights; related developments; Lockwood De Forest’s (1850-1932) works in *Oriental Arts*; Gottfried Semper’s (1803-1879) works focusing on textiles and architecture that are discussed in *The Four Elements of Architecture*, published in 1851, and discussions on the influence of technique on form through his writing of *Der Stil* (1861-1863); John Ruskin (1819-1900) and his admiration of craftsmanship - all established and promoted this profound inter-relationship between craft (knowledge, making, skill, process, technique, object and ornament) and interior architecture (space-making).

SS Jacob’s *Jeypore Portfolio* of architectural details (1890-1913), which is compiled in twelve volumes, 713 plates and James Fergusson’s books on architectural history (19th century CE) and recordings of *Indian Architecture* (1834 - 1845), which are identified as important systems of classification, along with other recordings and inventories, also discuss the inter-relationship between craft (making, process, ornament) and interior architecture (space-making). A few schools of Design and Architecture have significantly influenced the understanding of co-existence

of matter, maker and making. BAUHAUS (1919-1933); ULM (1953-1968); NID Ahmedabad (1961-present); CEPT University Ahmedabad (1962-present) are few amongst the most influential ones. Bauhaus curriculum (Gropius 1963) encouraged the inter-relationship between matter (material) and process (making and maker). Anand Coomaraswamy (1906-1947) and his works on art, aesthetics and architecture; Kapila Vatsayana (1970-2020) and her scholarly works on Indian classical dance, art and architecture; Paul Oliver's works on vernacular architecture of the world (1960-2017) that reflect upon the profound inter-relationships between nature and built form; and, making and maker; and, Bernard Tschumi's (1985) declaration that craft is the answer to the search for meaning in modernist architecture of the first half of the twentieth century, provide enough information and opportunities for investigating this trans-disciplinary research, focusing on inter-relationships between craft and interior architecture.

The explorations combining textiles and architecture continue to fascinate the design fraternity. Experiments in Archi-Textiles (Ben and ARUP, 2005) are a testimony to this, amongst other notable works. In an evolutionary perspective of the *longue durée*, textile art has always been a discreet companion to architecture (Sowa, 2007). Modern utopia, envisioned by John Ruskin and William Morris were built on the satisfactory character of craftsmanship, exempt from clear-cut divisions between work and life (Sennett 2008). Tim Ingold's research on creativity, cultural improvisation, skills, livelihood and migration, through the lens of anthropology (2000-2011) provides valuable insights. There are several other disciplines and theoretical perspectives that shape our understanding of inter-linkages between craft and interior architecture, such as Folkloric Ideology (Lucie-Smith 1981; Metcalf 1997; Johnson & Wilson 2005; Sam 2011; Tzanidaki & Reynolds 2011); Material Culture (Jules David Prown, 1982; Woodward, 2007); Intangible Heritage, Culture and Vernacular traditions (Luutonen, 2008; Kokko & Dillon, 2010; Lappalainen, 2011); Narratology and Narratives (Eco, 1973; Dahejia, 1990; Saraswat, 2012, 2015, 2017, 2022); Edification or Restoration (Sowa and Saraswat, 2018; Unpublished concept paper on matter and process); and, many more.

The conceptual framework and historiographical account facilitated the researchers in connecting the dots; identifying emerging gaps; and, deducing theoretical inter-relationships between craft and interior architecture. Craft has largely been understood as a personalised occupation which is utilitarian; ritualistic; cultural; mythologically significant; narrative; and, aesthetic (Coomaraswamy, 1906-1947; Vatsayana 1970-2020). Craft emerged as a subject of study in the late-eighteenth century and as a focal point for debates over industrialization and aesthetics during the nineteenth century. Today, craft remains a controversial component of art making, design, and mass production (Wells, 2014). In fact, craft does not have a specific definition or concept, and it is extremely demanding to understand and decode it. The researchers and practitioners of craft, are deciphering additional layers associated with it, including space-making. Together, varied definitions and sensitising concepts (Blumer, 1969), which are referred to and adopted, serve as the conceptual framework for this research, leading to new insights, such as - crafts do not have to be understood in terms of non-economic activities only, they are capable of contributing to a wider economy; crafts need to be explored within the milieu of interior architecture, which can create opportunities for employment in the craft sector as well as building construction industry; and, crafts have the potential of becoming a powerful media to tell stories about buildings and contribute to space-making.





SMUS23_17

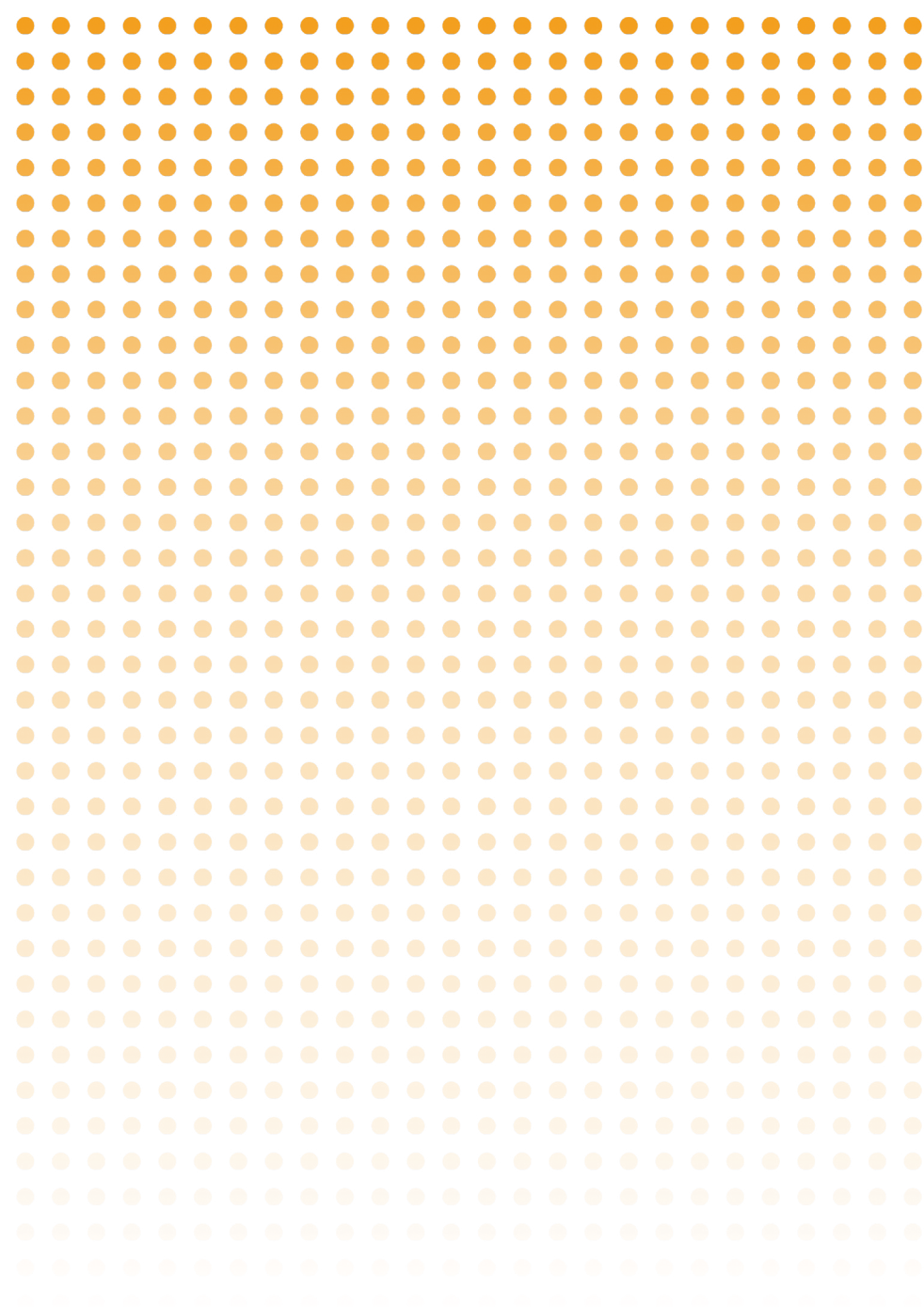
Design Methods for Accessibility and Social Inclusion

Session Organiser:

Gaurav Raheja

Professor, Indian Institute of Technology Roorkee





01

Universal Design for Urban Spaces: The Case of Institutional Area in Sitapura, Jaipur, Rajasthan

Keywords: Mobility; Walkability; Social Inclusivity; Urban Services; Universal Design

Pooja Agrawal ¹, Pushpak Bhagwati ¹, Tanya Chaturvedi Vegad ²

(1) *Aayojan School of Architecture, Jaipur, India*

(2) *DRONAH, India*

Due to limitations resulting from the built environment, persons in society with various requirements and needs (disabled people, elders, children, pregnant women, parents with strollers, etc.) face several challenges when attempting to access urban indoor and outdoor services. The creation of an environment and a product with universal usability is known as universal design. In recent years, the academic community has embraced universal design as a design strategy because of its inclusive and unifying qualities. Planning and arranging urban areas in accordance with universal design principles would improve the quality of life for everyone who uses the city.

In the fieldwork component of the article, the appropriateness analysis of the space usage in a selected sample location has been carried out meticulously under four selected headlines, with reference to the universal design principles and standards.

First: Mapping of existing mobility infrastructure in Sitapura Institutional area

Second: Analyse the issues related to inclusivity and appropriateness of existing accessibility mechanisms.

Third: Developing a methodological approach to devise and plan walkable accessibility specifically for disabled and senior age group

Fourth: Making recommendations manual with write-up and graphics.

Fifth: Implementing recommendations in a multi-stakeholder environment

This paper maps, understands and analyses the issues related to urban accessibility and how appropriate it is to people with disability and senior citizens and how a methodology can be developed or implemented in the current situation to improve accessibility and make it more universal and comfortable for urban people.

02

Technical Assistance for Social Housing: Reflections from Two Experiences in the State of Rio Grande do Sul – Brazil

Keywords: Mobility; Walkability; Social Inclusivity; Urban Services; Universal Design

Josiane Andréia Scotton ¹, Luciana Inês Gomes Miron ¹

(1) Universidade Federal do Rio Grande do Sul (UFRGS), Brazil

Based on the recognition of the housing reality in Brazilian cities, this paper addresses technical assistance for social housing (ATHIS).

Housing conditions have long been discussed in Brazil, especially since the country's industrialization when a large mass of workers migrated to the cities. In addition to urbanization, squatter settlements and slums started to appear in larger numbers (MARICATO, 2002), marking this displacement of the population from the countryside to the city in search of work in the industrial sector. These workers did not have their salaries regulated by the needs of their reproduction (MARICATO, 2002) and, therefore, insufficient remuneration to cover the necessary living expenses. In the same way, the cities were not prepared to receive all the new urban population demand, which according to Santos (1993), grew 653.03% between 1940 and 1980.

These circumstances would be the key to explain the huge practice of illegal self-construction of housing (MARICATO, 2015). This happens because the population in need of housing, and without the necessary support from the State, search ways to solve their problem.

Data from the survey conducted by the João Pinheiro Foundation (FJP) in 2015 (published in 2018) show that the Brazilian housing deficit reached 6.355 million, of which 5.572 million or 87.7% are located in urban areas. The number of homes with some inadequacy such as lack of infrastructure, absence of exclusive use bathroom, inadequate coverage and overcrowding, exceed 9 million (FUNDAÇÃO JOÃO PINHEIRO, 2018). Still, when analyzing the perspective of the composition of the average Brazilian family; which according to IBGE (2012) is 3.3 people per household; the numbers reach 57 million families living in inadequate conditions, almost 1/3 of the Brazilian population. Numbers, which according to Amore and Leitão (2019), are known to be underestimated, taking into account that more than 47% of Brazilian families live in cities and more than 45% of households maintain income of up to three minimum wages, with situations that can be even more serious in the poorest states (PNAD, 2015). This reveals the existing gaps in the context of low-income families. Where the lack of sewage system, internal ventilation and solar incidence are some of the characteristics frequently present.

Being aware of this reality, in the last century (starting in the 1950s) discussions began about technical assistance in architecture and urbanism in Brazil and the democratization of architecture through practice.

In addition, discussions about the quality of housing for low-income populations have advanced in the consolidation of the idea that social housing projects (HIS) should bring with them the search for the production of housing units more suitable to the wishes and needs of the future resident (SOUZA, 2007); and that when designing social housing it is necessary to know the lifestyles of the residents so that the architecture reflects their needs and living conditions (RAPOPORT, 1978).

It is necessary, therefore, to know these desires and needs; which is often a challenge because architecture and urbanism projects “remain distant from the real problems that the city and society face” (SANCHES, 2015). In this context, the participatory practice can be an alternative approach and adequacy to the real needs.

With this conception and understanding, the present work addresses the relationship between two themes: technical assistance for social housing and participation in design processes. From this, seeks to understand how both can contribute to the different housing realities in the country, towards the realization of the right to adequate housing, guaranteed by art. 6 of the Brazilian Federal Constitution (BRASIL, 1988).

In order to raise this discussion, the research focuses on two cases where technical assistance was developed by means of participatory project processes. These two cases, the empirical objects of this work, made it possible, above all, to investigate the participatory design process, which can bring important contributions to the reality of the populations involved and seems to provide an opportunity to meet the needs of low-income populations, providing housing that is more appropriate to different realities.

The cases analyzed are located in two different contexts: 1) the city of Porto Alegre and 2) the city of São Leopoldo, both in the state of Rio Grande do Sul, South of Brazil. This is qualitative research, where the methodological approach aims to capture the perception of those involved in the process, using observation and interview techniques.

The research was carried out in three stages. The first stage was exploratory, with data collection carried out by means of bibliographic and documentary research and non-participant systematic observation. The second stage focused on understanding the Technical Assistance process from the perception of those involved: technicians and residents. In this stage data collection was carried out through semi-structured interviews, applied to the technicians and the residents, based on a previous script prepared by the researcher. The semi-structured interview was considered adequate due to its flexibility at the time of collection, being possible, if desired, to go deeper into certain questions or quickly go through others. Also in this stage, non-participant systematic observation was used, whose observations were recorded in a field journal by the researcher.

The third and last stage of the research aimed at the analysis and interpretation of the data collected in the previous stages, building the research results. The confrontation of the results with the literature made it possible to reflect critically on the proposed theme.

The results achieved indicate that technical assistance (ATHIS) has presented itself as an important instrument with the potential to contribute, firstly, to the implementation of projects with better architectural quality, appropriate to the life and specific needs of the population. Moreover, it also contributed to the realization of the right to use public water and energy services, through the conquest of ownership and regularity of the living space. It can be said, therefore, that the achievement of possession in itself is a gain in quality of life, since it is related to peace of mind and security to invest in your space without fear and access to these services. Finally, the ATHIS has enabled advances in the use of participatory methodologies, contributing to the democratization of knowledge and the empowerment of those involved in the process. The empirical studies have brought to light the different realities and needs, which can only be visualized by getting closer to each specific reality. This is where the fundamental contribution of technical assistance lies,

in giving voice to these needs that are usually suppressed or generalized, by listening to the less favored populations that make up a large part of Brazilian cities.

Additionally, through participation, facilitating the growth of the population's critical conscience, strengthening its power of claim and preparing it to acquire more power in society (BORDENAVE, 1994). Through participation, it makes it possible to solve problems that seem insoluble to the individual if he/she relies only on his/her own forces.

03

A Path towards Conscious Inclusive Design Decisions

Keywords: Accessibility; Inclusive Design; Social Model of Disability; Intersectionality; Design Decisions

Pratistha Sharma ¹

(1) University of Teesside/ Hyper Island, India

We are living in a world of rapidly ageing populations with a broader range of physical and cognitive capabilities than ever before. According to the World Health Organisation Report on Disability 2011, one in five people has some form of disability - that's over 1 billion people across the world.

The need has never been greater for products, services, and environments to be developed that does not exclude but instead reflect more accurately the diverse demands of today's users. - particularly older and disabled people. This research project investigates ways to open up the design process and design for diversity.

Firstly the paper presents a critical overview of the research project and begins with the review of existing literature on understanding inclusive design and it's nuances from universal design and accessibility. A business case is then made, which analyses the role design could play in bridging the disparity between the user and designed experience.

The paper then describes the characteristics of the design process and how the primary and secondary research has informed the prototype of a 'user mapping canvas' for designers. This tool challenges designers assumptions of users and activates a sense of awareness with regards to the diverse demands of the user. As a designed output informed by the research, this canvas tool is a useful resource for designers across industries.

04

A Path towards Conscious Inclusive Design Decisions

Keywords: Accessibility; Inclusive Design; Social Model of Disability; Intersectionality; Design Decisions

Iram ¹, Gaurav Raheja ¹

(1) Indian Institute of Technology Roorkee, India

In India, family has remained the fundamental organizing unit for economic support, physical care, and social security. However, in recent decades, intergenerational relationships and the role of women in the family have changed considerably as family's transition, affecting the care and welfare of the elderly (Berkman et al., 2012). In addition, their socio-economic circumstances have changed, resulting in alterations in their living arrangements. As a result of cultural shifts toward individualistic lifestyles, people prefer to live in their independent houses, resulting in the development of one-person households in India. There is an increasing trend in the living arrangement patterns, where living alone or with a spouse only is becoming more prevalent in India (B Mane, 2016).

Further, in a study by Help Age India, it is estimated that about 6 percent of the elderly are living alone, and about 10–20 percent of the elderly are suffering from loneliness (Aravind, 2020). In India, the elderly is more vulnerable since the pandemic has exacerbated the psychological and behavioral health of the elderly by making them more vulnerable to social isolation and loneliness. As a result, communal stigmatization of suspected and confirmed cases is inevitable (Sood, 2020). This issue has a significant impact on the quality of life of elderly. As a result, the problem intensifies in the era of social isolation (Rana, 2020). This situation is likely to have negative impact on the quality of life of elderly. Therefore, identifying QoL factors affecting independence of Indian elderly in neighborhood context is crucial.

The participants for this study were selected using a purposive snowball sampling approach. Individual interviews with participants ($n=30$, ≥ 60 years) living independently in urban neighborhood areas were conducted. The exclusion criterion was elderly with any underlying severe medical conditions and those in need of assistance with daily living activities. Participants belonged to upper-middle-income socio-economic group, fluent in Hindi or English. However, the group composition was kept culturally homogenous.

The study was conducted using a qualitative survey methodology. In-depth interviews were conducted to explore the QoL factors affecting independence of elderly. Participants were informed of the audio recording and assured of anonymity and confidentiality. Verbal consent was obtained before the commencement of the interviews. Each interview lasted for 45-60 minutes, which was audio recorded and transcribed verbatim. A predetermined list of broad, research-driven questions was developed based on insights gained from a literature review. Each interview started with an explanation of purpose of the study, followed by open-ended questions based on the impact of ageing on their lives, their perspective on QoL, the impact of QoL on their independence, and their neighborhood experiences. At the end of the discussion, participants were encouraged to include additional information.

The analysis of data generated codes were categorized into four factors: physical, psychological,

social, and environmental. Transcripts were coded in NVivo 12 software to generate individual categories. Data saturation was attained, whereby no new codes were presented upon reviewing new comments. The key data point extracted from the interviews in the form of direct evidence, such as quotes and responses. The evidence from the data is moved, grouped and sorted into various codes. These codes are categorized into QoL factors affecting independence of Indian elderly in neighborhood context.

The present study proposes a methodological framework to identify QoL indicators influencing independence of Indian elderly in urban neighborhood. The study incorporates existing theories on elderly, various QoL measuring tools or scales developed on western ideologies; and identification of QoL factors affecting independence of Indian elderly in neighborhood. The outcome is useful for architects, planners, and decision-makers to frame neighborhood development guidelines to cater to the list of identified QoL factors affecting independence of elderly. The proposed framework can be further explored on a larger sample to better understand the generalization of the study.

05

Moving Beyond ‘Tokenism’: Methodological Challenges and Opportunities of Researching Children’s Everyday Mobility Experiences in India

Keywords: Children’s Participation; Urban Mobility; Research Tools; Participatory Planning; India

Megha Tyagi ¹

(1)Technical University Berlin, Germany

Children’s participation in urban planning processes is increasingly recognized as an essential component in democratizing the practice of planning inclusive cities. Several years of research, advocacy and adoption of United Nations Convention on the Rights of Child (UNCRC) has paved way for an environment where children are no longer considered ‘vulnerable’ or ‘adult in making’, instead they are identified as ‘active citizens’ with equal rights in our built environment. However, engaging children in a meaningful way beyond the tokenistic approach of considering them as a data source has been an ongoing challenge for city planners, designers and policy makers for the last three decades (Shamrova et al., 2017). Cities remain unprepared and lack an overall clarity on the various barriers and enablers to mainstream children’s participation (Mansfield et al., 2021). The situation stems from the complexity of the issue, which can be sociological, cultural, political, structural, procedural, methodological and epistemological in nature (Horelli, 1997; Mansfield et al., 2021).

In the past, there have been some interesting examples from academia and practice that tried to resolve the issue by seeking to achieve the highest level of Roger Hart’s (Hart, 1992) ladder of children’s participation. These examples include documentation of children’s engagement in different stages of urban planning activities such as design and development (Derr et al., 2016), city strategy (Cunningham et al., 2003), or children’s perceptions and conceptions of the urban spaces (Humberto et al., 2022; Noonan et al., 2016). The research methods employed for such purposes are primarily categorised as diagnostic (questionnaire, interview and observation), expressive (drawing, mapping etc.), situational (child-led tours, focus group discussions), conceptual (model making), organizational (children’s city council), political (children’s forum) and digital (minecraft, stadsbyggarna etc.) (Ataol et al., 2019; Horelli, 1997). Evidently, the practice of planning with children require a diverse range of methods in order to include children with different skills and interests (Derr et al., 2015). Additionally, it is also widely understood that the application of methods requires local adaptations especially when researching with children living in diverse contextual realities of distinct physical, economic, political and socio-cultural dimensions (Ataol et al., 2019).

Focusing on the same line of enquiry, this presentation will bring forth the challenges and opportunities of contextualizing research tools when working with children in urban Indian context. Children’s participation in urban planning process is at a nascent stage in India. The government has recently recognized the significance of child-friendly built environments and is working with diverse stakeholders on various pilot projects, policy documents and design guidelines to prioritize the needs of children in urban realm. Among the various indicators identified for assessing the impact of urban development on children, ‘mobility and safety’ has been acknowledged as an indispensable component (NIUA, 2016) and the focus has been primarily to improve street design and accessibility for children at a larger scale. Mobility to and from school has been taken up as the initial focal point followed by scaling up of proposed solutions to public transport and

active transport options for children and their caregivers. The current state of affairs, therefore offers a unique opportunity and a fertile ground for researchers to experiment, learn and share various research methods that assure a meaningful children's participation in shaping their built environment for supporting their active and independent mobility.

The overall aim of the presentation is to reflect upon the contextualization of appropriate research tools with children on their everyday mobility in an urban Indian context. It draws upon my years of on-field experience as a researcher in working with children aged 7-12 years and their caregivers from the three metropolitan Indian cities of Kolkata, Delhi and Gurugram. I employed mixed method research tools in case of Delhi and Gurugram, where the focus was to gather in-depth information on children's daily lives, their perception of local surroundings and notion of 'independence' in relation to the urban space. In contrast, in case of Kolkata, I adopted a quantitative approach to collect a large-scale data set that was particularly centred around children's mobility to school and other local destinations including park, friend's house, structured class, local market etc. In both cases, research tools employed were taken from previous studies conducted largely in the Global North context but contextualized for India addressing the ethical, cultural, procedural and sociological challenges.

The core idea is to present a methodological pathway to understand and gain deeper insights on the lived experiences of children's everyday mobility in India. I will map the advantages and disadvantages of diverse qualitative and quantitative methods applied in different cities and level of engagement with children. Additionally, I will also bring into the limelight the significance of clear communication as a means of enabling a shared power dynamics between children and adult researcher. In general, the presentation will bring an Indian perspective into the evolution of on-field research methods with children to gain insight into their experiences of local surroundings. At the same time, the core argument will centre around the fact that children are extremely significant contributor to our understanding of urban issues and they need to be encouraged so as to express themselves clearly to provide meaningful data for urban policy and planning level interventions. Clearly, the proposed presentation aligns directly with the agenda of session 17 on 'Design Methods for Accessibility and Social Inclusion' as it advances the goal of social inclusion of children in the realm of urban mobility. It presents a unique approach of adapting and modifying the existing research tools with children, addressing their needs and characteristics ultimately supporting better planning and design implementation of inclusive built environment policies for all. Moreover, it anchors itself in Sustainable Development Goal (SDG) 11 to make cities inclusive, safe, resilient and sustainable. More specifically, it relates to the interrelated targets 11.2, 11.6 and 11.7 from a child-focused lens. Additionally, it also supports the fundamentals of other international movements such as UNICEF's Child-Friendly Cities Initiative (CFCI) and New Urbanism, both of which underscores the need to promote a diverse, accessible and sustainable mobility infrastructure for children's overall wellbeing.

06

Living Wall Participatory Design and Construction Method – Educational Game Tool for Child-Friendly School Environments

Keywords: Participatory Design; Educational Game Tool; Method Evaluation; Child-Friendly School Environments; Social Inclusion

Mina Radić Sibinović ¹, Marta Brković Dodig ¹

(1)University Union Nikola Tesla, Belgrade, Serbia

This research evaluates specific living walls' participatory design method in schools, investigating methodological issues in its implementation. Complete hands-on gamified process came out from the landscape artist and biologist Marc Granen. He has developed and conducted a series of living walls' participatory designs and constructions together with the pupils through an educational game tool in many public primary schools in Barcelona, Spain. As a case studies, living walls in three different schoolyards have been selected and observed in May 2022. The main aim of this research is to maximize living walls' social and educational effects in schools, developing recommendations for the same participatory design method improvement.

Introduced in 1999, child-friendly schools (CFS) present places of great importance to “increase the learning effectiveness, efficiency and reach of education systems and to enable all children to realize their right to learn” (Chabbott, 2004 p. 2). CFS frameworks strive to achieve the next five standards:

1. Inclusiveness
2. Effectiveness
3. A healthy, safe, and protective learning environment
4. Democratic participation and
5. Gender responsiveness (Clair et al., 2012).

Therefore, the design of CFS and their environments has a crucial part in both, schooling, and out-of-school education. Today, many school facilities in urban areas seek at least minimal interventions in designs and their surroundings. If exist, schoolyards, especially those located in urban areas are covered with concrete, without any or with minimal vegetation. According to Bikomeye et al. (2021), green schoolyards are defined as “schoolyards designed with greenery and natural elements to create a park-like environment, as opposed to asphalt-based playgrounds” (p. 1). Bikomeye et al. (2021) suggest schoolyard greening to increase socioemotional children's health regardless of their race or ethnicity. In order to establish CFS in existing school facilities, greenery interventions in schoolyards could be a starting point. Such examples already exist in urban areas of developed countries: Spain, Great Britany, Germany, the United States, Singapore, etc. To benefit more, some schools are striving to make these interventions as hands-on experiences where children's democratic participation is a tool to learn about environmental sustainability (Davis et al., 2015), thus achieving inclusiveness and making healthy and safe learning environments. Published scientific literature confirms the existence of living walls' numerous benefits, as they present a contemporary way for adding vegetation to facilities' facades in dense urban areas. The great importance of children learning environments have the social - improved physical and mental health (Sheweka and Magdy, 2011), lower levels of fear, and less violent behavior (Tong, 2014), so as an educational benefit (Radić et al., 2019). According to Hop and Hiemstra (2013), they can be in use for teaching biology and art classes in schools and educational centers. Despite the available scientific data that confirms living walls' numerous benefits, so as their existence in schools, very

little has been written about participatory tools for creating them. For this reason, paper analyzes complete participatory process developed and implemented in primary schools in Barcelona, Spain, and finally, lists recommendations on how to improve same design tool.

Connecting the issue of vegetation lack in schoolyards with social and educational living walls benefits, children's participatory design and construction projects have been conducted in primary schools in Barcelona, Spain. Initiated by the Environmental Department of Barcelona City Hall in 2014, they had on focus environmental sustainability by bringing nature into schools and keeping children involved together in all three steps: living walls' design, construction, and maintenance. To collect data about the conduction of living walls' participatory design and construction, case study research design was implemented in May 2022. The selection of primary schools was reduced to three where in yards living walls still exist: Pau Vila, Cervantes, and Ceip Auro. Firstly, semi-structured interviews have been conducted with the landscape designer who developed and carried out all three phases for each school separately. Secondly, schoolyards within installed living walls have been observed, aiming to identify different ways of their use, so as the open spaces within they have been installed by children themselves. Finally, data have been transcribed and later analyzed using thematic analysis. Therefore, this paper lists recommendations for the improvement of existing educational participatory game tool as a living walls' design method in schools in Barcelona based on identified methodological problems in its application. Although it resulted in both, the design of the product (educational living wall) and spaces (schoolyard) for children, their families, and school community members, different levels of issues existed. One of the biggest challenges that landscape designer mentioned was to bring children's attention and excitement and take care of their wishes related to living wall design. In the group of 30-40 participants, there was always a small group of 2-3 pupils who did not want to participate, so they need a different approach. The designer also had a task to recognize children's abilities and interests, so he could give them proper tasks to be well involved. Since the construction, the main issue of the living walls' operation presents maintenance. Moreover, in some schools they have been removed because the plants became completely dry. Three living walls that have been analyzed are also not in the perfect condition. This goes along with the observational data that confirmed the lack of children's interest in living walls' use outside of teaching activities. Open spaces, within living walls have been installed, were in use for dancing classes and during a break. In the same period, children did not show any interest in living walls. The designer explained that the greatest effort and care for living walls' maintenance showed pupils that were participating in the project. After the construction, other groups of pupils showed jealousy trying to cut the plants. The additional social aim of the project was to connect children between different primary schools using social media where they could share the living walls project experience, thus creating an urban network of biological information vital for understanding the natural rhythms of the city.

As a part of the first author's Ph.D. research titled "Low-Cost Vertical Gardens in Schools – Built Environment Education Tool for Tackling Sustainability Issues", this paper presents a research step that precedes the development and application of an educational gamified participatory living wall design tool for schools in a developing country, Serbia. Evaluating the existing practices in a developed country, Spain, the paper refers to the session as it analyzes already applied specially developed living walls' design method that also acts as an educational game tool for CFS, providing inclusiveness and a healthy learning environment through children's democratic participation.



SMUS 23_18-26

Joint Methodological Challenges for Spatial Planning and the Social Sciences Regarding Social Equity

Session Organisers:

Fraya Frehse

Professor, The University of São Paulo

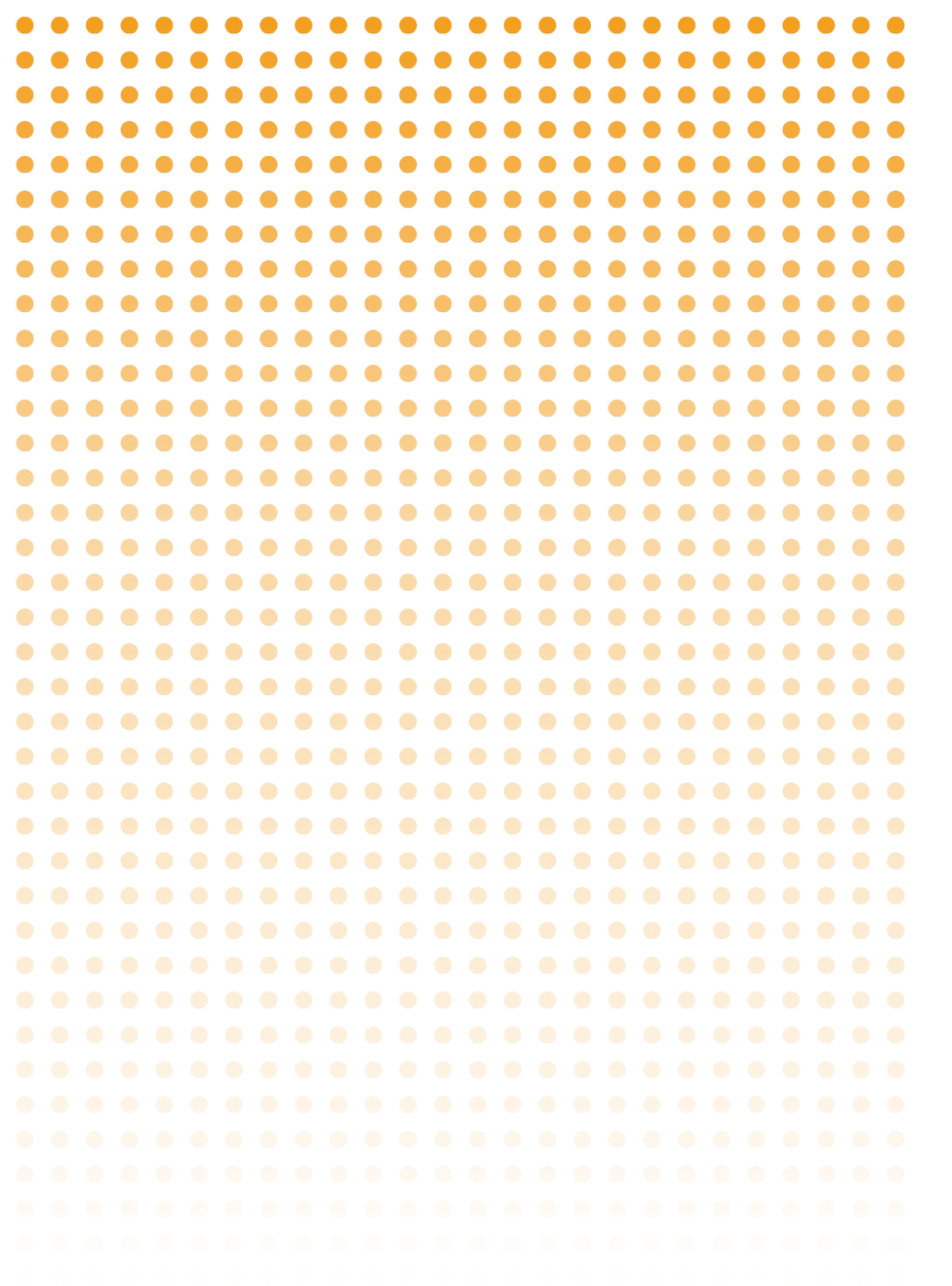
Ariane Sept

Professor, Munich University of Applied Sciences

Natalia Martini

Jagiellonian University





01

Navigating Methodological Misunderstandings and Conflicts in Urban Planning Research Using Heuristics and Typologies from Social Sciences Methodology**Keywords:** Urban Planning; Social Sciences Methodology; Heuristics; TypologiesJacques du Toit ¹*(1)University of Pretoria, South Africa*

Urban planning is often regarded as an applied social science. Theories and methods are typically borrowed from the more descriptive sciences, such as geography and sociology, and used in urban planning curricula and research, albeit sometimes haphazardly. This borrowing of theories and methods from the more descriptive sciences, as well as the strong normative orientation of urban planning to want to go beyond research and address tangible urban problems, especially in terms of sustainability and equity, inevitably leads to methodological misunderstandings and conflicts, perhaps more so on the side of urban planning. Tensions in urban planning research, including postgraduate studies, typically centre around the following questions; what is the appropriate context and purpose of urban planning research (the sociological and teleological dimension), how are urban planning realities understood (the ontological dimension), what are valid knowledge claims in urban planning (the epistemological dimension), and by which methods should this knowledge be constructed and should urban problems be addressed (the methodological dimension)? This paper argues that these methodological misunderstandings and conflicts between urban planning and fields such as sociology, are normal and should be accepted as part of the wide and messy terrain of urban planning research. Instead of disowning or trying to necessarily solve these misunderstandings and conflicts, the paper instead draws on social sciences methodology to present a set of heuristics and typologies that may be used to make better sense of urban planning research, and to navigate methodological misunderstandings and conflicts more pragmatically.

02

Planning Practices and Social Theories Communication When Social Realities Are Complex Enough – Case Of Viet Nam National Master Plan**Keywords: Planning Practices Social Theories Communication; Viet Nam; Master Plan**Lân Ngọc Cao ¹, Phương Ngọc Mai Phan ²*(1) Vietnam Institute for Development Strategies, Vietnam**(2) Independent Expert, Vietnam*

Vietnam went through a long history of spatial organization at the village scale which effectively served the activities of the water-rice civilization. The spatial organization practices followed the ideology of humanness – universe – land in harmony. Common wells and village waterways were highly protected which showed the importance of water to water-rice cultivation and the practice of saving natural resources. People's daily communication happened around the village well(s) of the best water quality, reserved as drinking water source and other ponds and lakes for bathing in groups and laughs. Village festivals were often organized around the wells and ponds near the community house (Đình làng) (Gourou, 2015; Nguyễn V. V., 2013; Ory, n.d.; Phạm, 2016). The village space reflected a deep understanding of the villagers' activities and their community culture. The space combined smoothly social and economic activities, in which people could reach the wells and lakes on the way home after working at the rice fields or after trading in marketplaces. The markets were very often at the outside areas of the villages to prevent strangers from entering the villages (Nguyễn M. T., 2017) while within the village, people knew one another well and organized the space to support their connections. Equality was ensured by strict village rules on waterways running through all the fields. On national level, waterways including rivers, channels and dams were carefully maintained to serve transportation, mostly for trading and irrigation in almost all dynasties (S. L. Ngô, 1697; Trần, 1920).

However, after getting independence, at the historical moment of choosing industrialization in a command economy in 1960 (in the North first, then 1976 for the whole country) and then market economy toward socialism in 1986, the planning has to change following the socio-economic changes. The people of water-rice villages were used to creating national damp system to support water-rice and waterways to trade products volume of handicraft products, now face new goals of industrialization and modernization, which were not locally born.

The national master planning has been always gone hand in hand with the ten-year socio-economic development strategies. In order to realize the goals in the strategies, the need of a “new” theory explaining Vietnam in the new era has been paid attention in many decades, via multiple state-level and ministerial-level projects (P. H. Dương et al., 2000; Lê et al., 2006; D. V. Ngô et al., 2008; B. Â. Nguyễn et al., 2000). Many of them aimed to solve the puzzle of market economy with limited morality problems and heading toward socialism. Many discussed a way to combine market economy with Co-Humanity/ Humanness/ loving and being close to common people (仁) theory founded by Trần Hưng Đạo (1228/1231(?)-1300), Trần Nguyên Đán (1325-1390) and Nguyễn Trãi (1380-1442). International experts studying innovation “Đổi mới 1986” in Vietnam often argued hard on a theory for Viet Nam at this point. Many theories were suggested such as Marxism into socialisms theory, chaos theory, East Asian developmentism (Wells-Dang, 2006), and reinvented Leninism (Vasavakul, 2006). This seeking for a theory has faced difficulties until now.

In such a situation, the national master planning process has applied theories from industrialized

countries to solve urgent needs, including Soviet distribution of productive forces in the command economy period and growth pole theories, economic corridors and Porter's model in market economy period. In the most recent period, innovation cluster model of Silicon Valley (T. B. N. Nguyễn et al., 2021) and United Nations' sustainable development goals are highly emphasized. Despite the lack of a "leading-the-way" theory (chủ thuyết), meaning a theory chosen after considering local conditions of a nation, coined by Ngô Doãn Vịnh (D. V. Ngô, 2009), national master planning in Viet Nam have gained certain success in meeting industrialization needs such as establishing nation-wide social infrastructure, maintaining agriculture land for food security and export and almost nation-wide transportation infrastructure for rural areas' connectivity (Nguyen & Nguyen, 2020) which ensures social cohesion and stability.

However, at "urban" level, it is more challenging. The long history of being villages surrounding administrative areas (being called "đô thị", being used as a translation for Western "urban") gives the planners little experience to form "new atmosphere" for businesses and innovative activities of "market economy". The history of Vietnam had little development of any "bourgeoisie" as public farming land got a large percentage of village land and the small number of landowners tried to be in harmony with farmers for "long-term cooperation" and to be "liked" (lấy lòng) by the village (Nguyễn V. V., 2013, p.110). "Urban" spaces are ruralized by village habitus. Villagers are more familiar with community solidarity during the flood or pandemic while living dynamically with "connectivity, information and business" is new to them. For example, small and street businesses are considered not desirable by local people. They try to set "urban rules" but they are not so sure how "urban areas" are and how to be "good citi-zens". Planners face the dilemma of accidentally marginalizing small businesses and challenging village life habits spatially (instead of combining them smoothly). In rural areas, people invest into ancient community houses which are no longer connected to their daily activities to (unconsciously) memorize the past of the water-rice civilization. This makes them stretched between spaces representing the past and today life.

This phenomenon reflects the "hesitated" Vietnamese with their one-thousand-year Eastern history, theorized by the school of East-West interaction led by Cao Xuân Huy (see Cao, 1995), Thu Giang Nguyễn Duy Cần (see Thu Giang, 1957), Kim Định (see Kim, 1974). However, this school only forecasts about situation of Vietnamese in East-West interaction and not pays much attention to proposing how certain actions would contribute to these forecasted scenarios, except from Dương Thiệu Tống (see T. T. Dương, 1995) with his belief that once being educated about how to combine selective Eastern and Western values, the East would soon surpass the West, achieving economic development with sustainability and humanity. Still, policy and planning need more details to act on. Planners often ask questions in their research projects being conducted to prepare for every ten-year planning: How to achieve "toward socialism" which suits Vietnamese traditions (P. H. Dương et al., 2000)?; What strengths they would sustain and nurture and what they would give up to "change their thinkology" to get ready to achieve desirable market economy version? (D. V. Ngô, 2009, p.122); Their cultural identity, would it turn into internal science and technology internal power (Luu et al., 2000)?; Would new rural development with "modern" infrastructure stimulate support their thriving for prosperity or break their sense of place (Nguyen & Nguyen, 2020) and make them feel strange? Looking like "action plan" questions, but they are actually theoretically rooted.

The authors of this paper question that national master planning always needs one leading-the-way social theory for planners to know what clear image of the change it should make on its socio-economy that fuel the people's available strengths and from there, what socio-economic activities

should be prioritized in space. The relationship between social theories and planning practices are like understanding the society and knowing how to react to produce the best scenario. So, if planning faces challenges, it may not be because planners do not accommodate social theories but have few (ready) social theories to rely on. The authors question the “gap” between social theories and planning and also policy practices. Does that gap really exist or today social theories could be lagging pretty far behind today realities and hold weak explanation power, at least in the case of Viet Nam?

03

Depoliticize Planning Through Application of Mixed Method in Spatial Case Selection Case study: Less Developed Regions of Iran

Keywords: Transdisciplinarity; Depoliticizing planning process; Mix method; Spatial case selection; Less Developed Regions

Samaneh Niazkhani ¹, Efsandiar Zebardast ¹, Angela Million ²

(1) *University of Tehran, Iran*

(2) *TU Berlin, Germany*

Urban planning is an inherently political activity (Adam, 1994), Therefore, political science approaches are included in it; But this does not always have positive synergistic results of the cooperation of different disciplines in transdisciplinarity; Especially in researches that focus on evaluation of plans and in important steps such as sampling, politicians' interventions have a bad effect; Because the quality and correct selection of samples has an undeniable effect on the generalizability of the research. So it should be controlled by the researcher which is the research area of this article.

There are always tensions over issues such as who (what case), how and under what circumstances is involved (C. White, 1996), because the outcomes of planning processes are always influenced by the interrelationships between a variety of stakeholders and parties (Campbell, 2001). In this regard, continuous efforts have been made to depoliticize development (and what is somehow related to development, such as evaluations and reform policies) in the planning process (Hout, 2008). For example, Buller (2019) promotes a transdisciplinary dialogue to define depoliticization as a dynamic and interactive process in planning, or Mössner (2016) explains that how consensus-building appears as a political strategy whose aim is to depoliticize sustainable urban development. On the other hand, due to the fact that less developed regions have a lower score than other regions in the indicators of sustainable development goals, including sustainable urban development (Xu et al. al, 2020) and have often been neglected in the processes of reducing inequalities and promoting regional development (Moreno Pires et al, 2020), Therefore, the proposed models for sustainable development try to maximize benefits for the development of communities by prioritizing less developed regions (Sharfati et al., 2019). In hence, paying attention to planning and evaluating plans in order to achieve sustainable development goals in less developed regions is of high priority and importance; And in that related researches, due to the large number of regions, the researcher has to choose limited number of cases from less developed regions.

In this research, we will introduce a mixed method in spatial case selection among less developed regions (provinces), because the mixed method due to a deeper understanding of the phenomena (Burke Janson, 2007) and providing richer data (Rossman and Wilson; 1985: p. 637), while helping to improve the validity and reliability of the research, it will remove the shadow of political interference and bias in sampling. In line with the scope of the research, which is the less developed regions of Iran, sampling has been done. In the first phase, the quantitative technique of cluster analysis has been applied; In this way, according to the basic data, approved by the Council of Ministers, the provinces of Iran are classified into 5 clusters; It is worth mentioning that due to the nature of the clustering technique, the provinces within each cluster are most similar to each other (isotropic) and the least similar to the others (Edwards, 1965). In the second phase, cluster heads were selected as "critical case"; "Critical case" logic has been applied under purposive sampling to make multi-perspective interpretations, liberating, collaborative and deconstructive of published research (Suri, 2011) and prepare positive response to the question that "If it happens there, does

it happen elsewhere?” (Etikan et al, 2016); those are suitable spatial cases. The sampling results in this research, show that the selected provinces from each cluster promote geographical and spatial contiguity with their previous (less developed) cluster, a matter that was expected to happen due to the “isotropic” property of in spatial development; A concept that describes similarity in different sciences such as physics, chemistry, economics, and geography; And it can be recognized in urban development and planning and be the subject of further research.

04

Territorial, Cultural, and Natural Diversity, The Basis for Effective Management of the Urban-Rural Gap in Land Use Planning**Keywords: Diversity; Urban-Rural; Planning, Land; Territory**Gisela Paredes-Leguizamón ¹, Juan Carlos Troncoso ², Jovanny Mosquera Pino ³, Aristarco Mosquera ⁴*(1) Fundación Universitaria Agraria de Colombia/Parques Nacionales Naturales de Colombia**(2) Parques Nacionales Naturales de Colombia**(3) Instituto de Investigaciones Ambientales del Pacífico IIAP**(4) Council of Alto San Juan – ASOCASAN, Columbia*

Colombia is a multi-ethnic country, there are 115 indigenous groups representing 4.4% of the population and speaking 64 languages; also black, Afro-Colombian, Raizales, and Palenqueras communities (comunidades negras, afrocolombianas, raizales y palenqueras – NARP) representing about 10% of the population, 2649 Gypsies or Romani, and multiracial communities. Colombia is also a biodiverse country, it has 8000 types of ecosystems, 1,342 protected areas guarded by its National System of Protected Areas; Colombia has differentiated regions, Caribbean, Pacific, Orinoco, Amazon, Andean, and Insular; it is a coastal marine country, it owns territory in the Caribbean Sea and the Pacific Ocean. Colombia has signed the following agreements: ILO 169 through Law 21/1991, which recognizes the identity of indigenous groups and black communities, the responsibility of the State in protecting the human rights of these peoples to participation, recognition, and respect for their customs, institutions, and own ways of development and use of their territories; likewise, the Agreement on Biological Diversity ratified by Law 165/1994 committing itself to the conservation of biodiversity, its sustainable use, and the equitable distribution of benefits. Colombia is a unitary, decentralized republic, politically and administratively organized into 32 departments, 1103 municipalities (11 are Special Districts) and 15 are non-municipalized areas.

Municipalities (Law 388/1997) are in charge of drawing up land use planning plans and regulating land use; and, recently, at supra-municipal level, progress has been made in formulation of land use planning plans for the departments and at national level in formulation of the General Policy for Land Use Planning (Law 1454/2011). However, in planning and land management predominance of urbanism persists, as a result of this circumstance the city system, urban agglomerations, and mobility infrastructure were designed. The rural territory and recognition and harmonization of instruments for ethnic and environmental planning with instruments for development planning and land use planning are incipient (Ocampo, 2015 and Paredes-Leguizamón, 2013), a fact that is reflected in that 43.9% of ethnic communities do not have access to any public service, the country's multidimensional poverty index in 2014 was 21.9%, while it was 69.5% for indigenous peoples, 58.2% for the NARP population and 19.3% for Raizal population (Government statistics department, Departamento Administrativo Nacional de Estadística - DANE, 2014), in 2019, the monetary poverty of the country was 35.7% and for populated centers and dispersed rural settlements it was 47.5% (DANE, 2019).

In 2012, the process of research and management for integration of protected areas into the Colombian land use planning began; it combines several approaches (rights, urban/rural, risk, and ecosystem), operates in a multiscale and inter-institutional manner and develops eight pilot cases in different regions. Product of joint community and inter-institutional work, progress has been made in the design and development of meeting methodologies, dialogue of knowledge,

which prevent and manage socio-environmental and territorial conflicts, harmonize instruments for ethnic planning and planning for protected areas, propose a route from the territory to the nation that guides the way to cross the borders that have made ethnic and natural diversity invisible for land use planning; this route leads to social inclusion, nature conservation, reduction of gaps, applying the differential approach in territorial management.

05

Research With Street-Dwelling Children and Youth: The (Methodological) Tension Between Research Ethics and Prevailing Laws of the Country**Keywords:** Street-Dwelling; Agency; Methodology; Ethics; LawsKhushboo Jain ¹*(1) Friedrich Alexander Universität Erlangen-Nürnberg (FAU), Germany*

“No child on the street” is a pre-dominant dictum in the child rights discourse and “no homeless on the streets” of the urban policy discourse. Yet, the number of street dwelling population is on the rise globally. Several laws and campaigns have been in force in India to take them off the streets, mostly following raid and rescue method, to no avail. Critically, the question “rescue to what” remains unanswered.

“Homelessness is a social problem”, is the sociological approach and hypothesis most research begin with. Taking a counter view, the All India Working Group for Rights of Children in Contact with Railways (AIWG-RCCR) was founded in 2014 in India to promote the concept of agency of children. Lack of existing framework to study the agency of street dwelling children and youth meant starting work from ground zero - defining agency for this population, finding a holistic approach and methods to study it, also bypassing the international and culturally inappropriate definition of child between 0 to 18 years and studying the lives of children/adolescents/youth on the streets and railway stations.

AIWG-RCCR launched a research to document the options children connected with the railways choose, in their given context, and the organic structures that support these options. This study was about the agency practiced by the child. Agency is reflected in the decisions children make, and these decisions are never ‘free’ choices but constrained by the environment.

Over a period of three years, with 2158 children and young people in 128 railway stations in India, the study explored mechanisms children and youth have established in the railway stations for everyday survival, how they deal with the constant attempt at making them invisible from these spaces and how they still ensure their presence through absence from spaces of public gaze. It also reflected on the unintended negative consequences of advocacy work to make children safer and more visible in these quasi-public spaces.

What would you do if you find a child in street situation during the research? Will you not rescue the child and hand her to the NGO? What if the child tells you s/he is being sexually abused? Won't you want the child out of this situation and will you still not rescue the child?

What if you found the child begging? What if the child was under heavy influence of drugs? What if the child was in employment of some sort, a case of child labour? Will you still not rescue the child during your research? What if the child was involved in criminal activities? So on and so forth...

These and many more questions on similar lines haunted this research since its inception... questions of tremendous methodological and ethical importance when studying spaces of vulnerability. There are methods to study vulnerability, precarity. But how do you study aspects of agency in such spaces? How does one bypass normative discourses and narratives, and address

important ethical concerns in such studies?

Ethics in general is the study of morality. It stipulates what is right and what is not right to do, as well as what one cannot omit to do (AIWG-RCCR 2018). In working with street dwelling children, there is the added dimension of the ethics of care, grounded in relationship and response. The whole study design was developed based on ten ethical principles formulated through intense deliberations by the AIWG-RCCR members along with the academic and core researchers hired to collect case studies.

In this paper, I would discuss how the ten ethical principles viz. informed consent, respecting (listening) the views of the child, ensuring choice and freedom of the child, confidentiality of the identity of the child, responding to the children's needs, making known services available, emotional truthfulness, establishing and limiting the relationship, constant introspection and following the Child Protection Policy were framed and implemented during the course of this study. I would further explore how these principles informed and guided the study especially when some of these ethical principles came in conflict with the prevailing laws of the country, for example, the clause of mandatory reporting under the POCSO Act in cases of child sexual abuse; and the interpretation of the Juvenile Justice Act as only rescue and rehabilitation and other Child labour prohibition laws.

This study was being conducted to fill in the policy gap on the lives of children who refuse to become part of the rescue and restore model. This research was also designed as an opportunity to initiate conversations on respecting the agency of the child, a challenge faced by most NGOs in the increasingly protectionist - international - project based funding regime. Hence, methodologically, this study was divided into two phases. In the first, Quantitative data collection phase, 40 child rights groups were selected and their social workers oriented to administer the questionnaire which was embedded into an Application named 'ChildSpeak' designed for mobile phones and tablets to ensure objectivity, data protection, and rapid data entry and analysis. Data of over 2,000 children, who had spent more than one month at the station, at 127 railway stations across India, was collected.

In the second phase, ten Core and Academic Researchers were carefully selected and a four-day orientation workshop was held with these Researchers. Ensuring a comfortable environment for the children to speak while fully respecting their privacy, detailed histories of 48 selected children, who had spent more than six months in contact with the railways, were collected around issues emerging from the first phase.

At each stage of the research, care was taken to minimise the bias of the researcher and respecting the views of the participant. Piloting of the questionnaire at each stage was a pre requisite and informed the final methodology. After each stage, the respondents in the research were part of the discussions and deliberations to ensure their maximum participation. After the case studies were collected, they were read out to the respondent and consent taken for use, to check the biases that may have crept in the interpretation of the stories. Yet, several gaps came up during the review of the study. However, this study and the methodology it developed is an important beginning in studying the lives of street dwelling population from an agency centric perspective.

*The author, Khushboo Jain, is one of the founding members of AIWG-RCCR and the lead researcher of the study.

**All India Working Group for Rights of Children in Contact with Railways (AIWG-RCCR) Study, Life World and Agency of Children in Contact with Railways. September 2018).

06

Area Based Development of Smart City Mission and Intra-city inequality: Case of Lucknow City**Keywords:** Area-Based Development; Smart City Mission; Intra-city InequalityShikha Puri ¹, Uttam Kumar Roy ¹*(1) Indian Institute of Technology Roorkee, India*

Smart city development has become a critical requirement for addressing global issues of rapid urbanisation. India, too, decided to support smart city development with the launch of the Smart City Mission in 2015. The mission sought to promote cities that provide basic infrastructure, a decent standard of living for their citizens, a clean and sustainable environment, and the use of “Smart” solutions as an enabler. It used area-based development as a tool to set an example for holistic development because this approach incorporates all sectors related to development of that area. However, ABD focusing on a specific area can lead to inequality, which in India can lead to intra-city inequality. In order to comprehend how ABD would affect intra-city disparity under the mission, it is crucial to understand the area chosen and its current infrastructure in relation to other parts of the city. This paper analyses the gap between spatial planning and social issue of inequality through comparative analysis of infrastructural provisions. Ranking has been used to do comparative analysis. According to the study, parts of Lucknow that are already better served constitute the ABD area, which could exacerbate already-present inequalities in the city.

The recent growth in urbanisation is mostly the result of developing nations. Urban planners in developing nations are consequently under tremendous pressure to provide planned urbanisation that incorporates improved infrastructure and necessary public services. The building of this planned urbanisation’s “smart city” has been a big undertaking for several nations, including India. The goal of the Smart Cities Mission is to support cities that adopt “Smart” technologies and offer fundamental infrastructure, a fair quality of life for residents, and a clean, sustainable environment. The also aimed to create a reproducible model that other aspirant communities can utilise. The focus is on long-term, equitable development. As a result, area-based development was the main emphasis of most programmes.

The Smart Cities Mission gave “lighthouse” or “area-based development” a lot of emphasis. The Ministry of Housing and Urban Affairs’ statistics shows that of the available Rs 2.01 lakh crore, 80% (Rs 1.63 lakh crore) had been set aside for ABD and just 20% (Rs 38,841 crore) for on pan-city programmes. The ABD would aid in holistic development by encompassing all development areas. Because ABD is a multi-stakeholder strategy, it also encourages inclusivity. However, in the Indian context, the strategy has been applied to a specific part of the city, which may have an impact on intra-city disparities. It is argued that the regions chosen for area-based development in the city already has superior basic infrastructure than other parts of the city. More development committed in that area would exacerbate already existing intra-city inequality.

The paper is related to session 26 of the conference as the study depicted the conflict between the social issue of intra-city disparity and spatial planning. The smart city mission aimed for equitable development; however spatially, the area chosen had advantages. The area being centrally located enables the city to develop faster with its own development as compared to other part of the city. This advantage gave the area favorability of the being the part of smart city development but at the same time increases the disparity within the city.

The capital of the Indian state of Uttar Pradesh is Lucknow. After Delhi, it is the biggest and most advanced city in North India. This city serves as the administrative centre for both the Lucknow District and the Lucknow Division. Lucknow has a long history of being a multicultural metropolis that has flourished as the artistic and cultural centre of North India. There are almost 2.8 million people living in the 350 square kilometre metropolis, which is spread on both banks of the river Gomti. 6.33 percent of the state's urban population resides in Lucknow. The city is noteworthy both for its historical value and for housing the Nawabs. The city is currently one of India's fastest developing cities and is progressively establishing itself as a business and shopping hub. Lucknow is known as the "Golden City of the East" because it serves as the nation's capital, its government's seat, and a significant hub for local commerce.

The centre portion of Lucknow is where the ABD neighbourhood is situated. This location falls under Zone 1 of the Lucknow Municipal Corporation area and is in Qaiserbagh. 70,000 people live in the ABD area, of which 22,000 are considered to be floating residents.

The ABD area in Lucknow has an area of 813 acres (3.29 km²), which includes smaller or bigger portions of seven wards, including Peer Jaleel, Wazirganj, Rani Laxmi Bai, J.C. Bose, Hazratganj, Yadinath Sanval, and Nazarbagh.

The study reviewed the area based development of Lucknow city. To understand the intra-city disparity of infrastructure provisions provided over the different parts of the city, comparative analysis of infrastructural provisions has been done. This comparative analysis involves ranking of various zones of the city on basis of infrastructural provision provided.

Comparative analysis is done for the infrastructural provision mentioned below:

- Slum population
- Water Consumption
- Water Supply network
- Sewarge Network
- Public Toilets
- Water Collection Coverage
- User Charges Collection
- Parks and Gardens
- Road Density

On the basis of comparative analysis of various zones of the city, ABD area of the Lucknow city constitute the better served part of the city. The ABD area of the city falls in Zone 1 of the city which is the core part of the city and centrally located. Zone 1 ranked 3rd on the comparison, which suggests that the area based development of the area demarcated under Smart City Mission would exacerbate already-present inequalities in the city which is not the objective of the Smart City Mission. The city has pockets that are less developed than the ABD areas chosen for the Mission and hence require more attention.



SMUS 23_19-01

**Analysing Hidden Forms of Violence and
their Spatialities: The Methodological
Challenges of Researching on Invisibilized
Group**

Session Organisers:

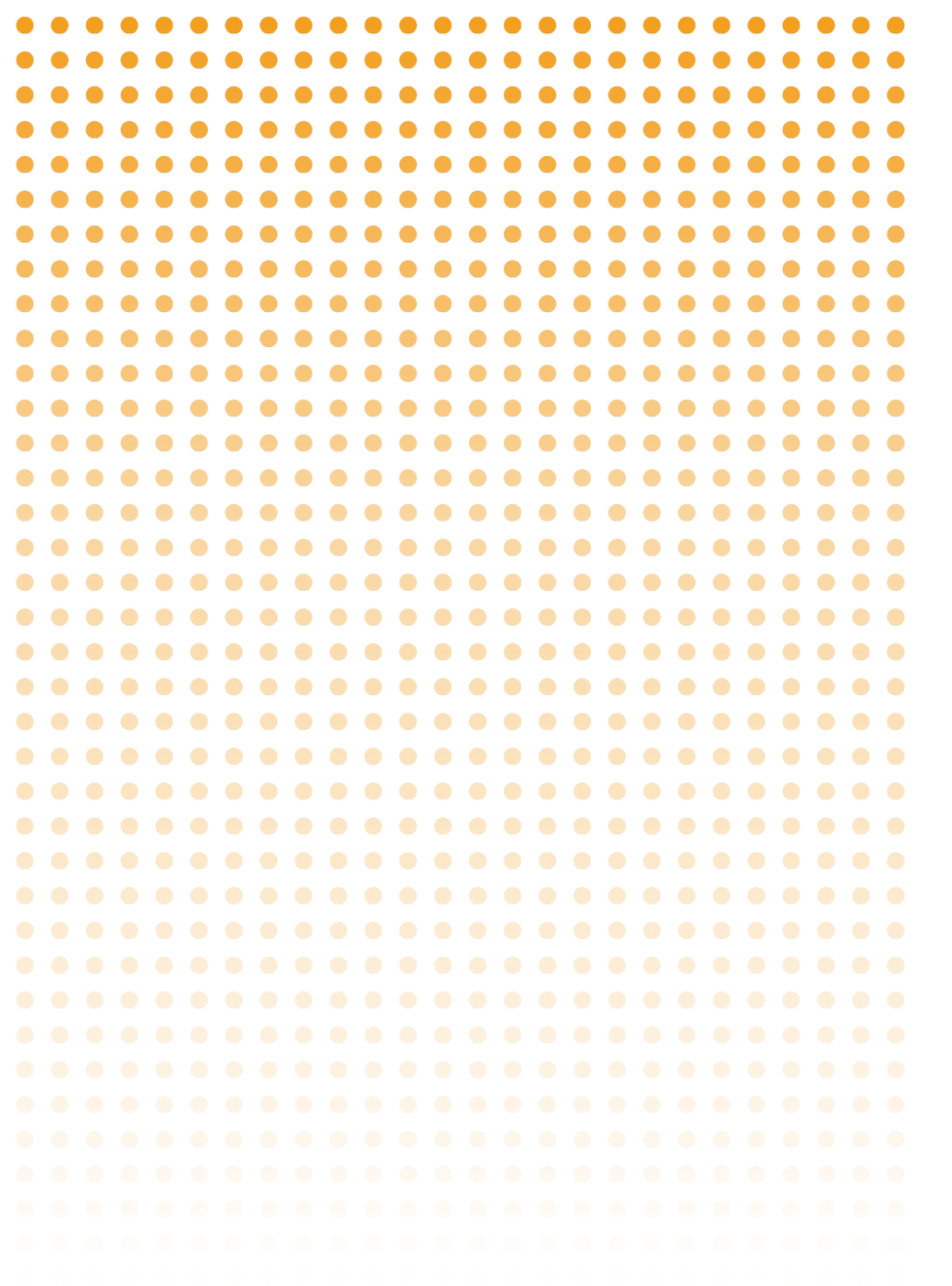
Susanne Nef

Zurich University of Applied Science

Frederike Brandt

PhD Student, TU Berlin





01

Male-Centric Sociology ? Acknowledging the Women' Scholar's contributions in the Domain of Sociology**Keywords: Androcentrism; Women Sociologists; Male-Cebtric Sociology; Decolonisation of Knowledge**Ghurni Bhattacharya ¹*(1)Bielefeld University and University of Bologna, India*

The paper titled “Male- Centric Sociology ? Acknowledging the Women' Scholar's contributions in the Domain of Sociology” leaps off to trace and give voice to the female scholar's contributions and preserve their thought processes in development of Sociology and shaping up the domain of knowledge production . This paper humbly attempts to challenge and renegotiate with the existing andro-centric perspective vividly present and quite dominant in the realm of Sociological Knowledge Production by acknowledging the works of Female thinkers in development of Sociological Arena . This paper does not speak of eradicating andro-centric perspective completely rather deals with co-production of knowledge by acknowledging both male and female scholar's contribution . Thereby this paper tries to understand gendered perspective which remains extremely crucial in developing a subject and also in framing or co-producing unbiased way of knowledge production by decolonizing the dominant way of producing it where lies it's relevance .This paper tries to acknowledge the works and revive the thought processes of all the women Sociologists worldwide like Harriet Martineau but with a specific focus to Indian pretext inorder to bring up voices from the Women Scholar's contribution especially from the Global South . This perspective also tries to co-produce knowledge by renegotiating with the dominant Eurocentric Perspective in developing the sociological domain of knowledge production.The paper is theoretical and primarily based on scholarly literary works ,secondary resources and theoretical approaches where it's limitations lie .

02

Digitalization and Political Participation: Methodological Challenges of Decoding Digital Progress and Gender Divide**Keywords:** Digitalization; Digital divide; Political ParticipationBinitha V Thampi ¹*(1) IIT Madras, India*

Digitalization is rapidly progressing in the Global South and states are attempting to integrate digital transformation into its agenda of social, economic and environmental development. The pitfall of the process, however, lies in its failure to build an inclusive development framework. Indian state has been at the forefront in implementing policies targeting digital progress, including a nation-wide campaign programme. The efforts have yielded results in the form of increased access, bridging the rural-urban divide to an extent, skill development etc. While these are well documented in the literature on digitalization in the Indian context, the limitation of the initiative is often understood mostly in terms of gender divide.

Surveying the literature on digitalization in India, in general, and Kerala, in particular, foregrounds certain theoretical issues. The first pertains to the interpretation of digitalization. Digitalization is understood in purely technical terms, couched in a linear narrative, whereas there are distinct proofs to the contrary highlighting digitalization as engaging and responding to contingent social forces. In other words, the unequal power relations, structural inequalities, barriers to access and skills and gender divide, while key to shaping the process of digital transformation in a societal context, are also in turn reshaped in the process. The second theoretical challenge concerns the ways in which gender is narrowly perceived in the literature on the digital gender divide. Feminist movements have severely countered construction of the homologous category of woman due to its implicit denial of difference. Any discussions of the digital gender divide without considering the socio-cultural identities of the agents tend to be incomplete in its analysis of social ramifications and inclusiveness of digitalization.

Analysing the gender aspects of digitalization programs is central to guaranteeing sustainable development goals. Exclusionary forms of digitalization also runs the risk of perpetuating structural violence based on socio-cultural identities where women tend to be doubly disadvantaged. Drawing conclusions on the supposed causal relations between digitalization and political participation, therefore, turns out to be problematic.

Among the states, Kerala has been making major strides in digitally transforming public services, including education, health etc., via its Digital Kerala platform and other channels as well. Kerala is hardly excused from the theoretical challenges of decoding digitalization and the digital gender divide pointed out earlier. In view of the widely lauded decentralized governance institutions and women's visibility within those spaces that the state has achieved, it is pertinent to examine the gender dimensions of ongoing digital transformation. This warrants significance due to the presumed centrality of digitalization in changing the grassroots governance patterns and thereby, women's role in local development. Given the historical trajectory of Kerala in local governance and women's presence in local governance institutions, it is critical to comprehend what digitalization as a socially mediated and gendered process is doing to the established governance structures of the state and women's participation in it. While this underlines the relevance of such an endeavour, studying the respective dimensions of digitalization presents couple of methodological issues.

There are methodological challenges of research on socially embedded nature of digital transformation and the gender divide it fosters. The ineptness of quantitative approach and inadequacy of employing a single qualitative method to comprehensively map the entire scenario summarise the primary methodological challenges. Besides, building an alternative non-linear account of digitalization requires the processes to be mapped along the axis of gender, caste, religion and class, which brings forth intersectionality as an analytical framework of the study. Outlining how the multiple social phenomena mediate digital progress in the context of Kerala draws in caste, religious and class communities as essential units of study. Further, incorporating gender identity to the analysis place women squarely within the multiple communities simultaneously. This, however, remains a relatively less researched domain in the literature on digitalization. In addition, the question of political participation and its gender dimensions complicate the study further as it requires extending the analysis of digital progress to critically examine patterns of political participation that the processes facilitated.

A possible response to the methodological issues is qualitative research approach, including informal interviews, literature survey, policy document analysis etc., grounded in interpretive or descriptive methodological framework. Despite such comprehensive methodological frameworks, the study is bound to overlook certain nuances, especially the distinctive ways in which women engage with processes of digital transformation and their patterns of political engagement that defy explicit trends that have been observed so far, which, however, are critical in shaping local governance and sustainable development.

03

Indigenous Women and Work: The Lived Experience of Indigenous Women in Tripura, Northeast India**Keywords: Indigenous Women; Work; Feminist Research**Linda Uchoi ¹*(1) Tata Institute of Social Sciences, Mumbai, India*

Across the globe, women's massive contribution to the family, community, and society is significant. The prominent participation by women in multiple aspects of cultural, social, economic, and political growth is still dearth acknowledged and overlooked in the contemporary world. Especially the immense support that is unpaid work such as household chores, taking care of children and older people, and other activities. The housework they perform is considered everyday deeds by society. Division of labour on women's engagement in unpaid housework and paid work as an extra burden has become a substantial and leading research area for many decades (Hochschild & Machung, 2012; Mckinley, Liddell & Lilly, 2021). However, there is not enough work done from an insider's perspective specific to women from the Uchoi indigenous community in Tripura concerning the lived experience of being a homemaker, participation in various subsistence economies, and their significant contribution to the family and community. This research therefore attempts to explore the indigenous ways of knowing and experience among the women concerning the domain and nature of work in their everyday lives. Moreover, the feminist methodology significantly adopts which comprises an argument that the research participants experienced an effect of empowerment from the data collection tool such as narratives and focus group discussions in feminist epistemology. The subject that chooses to use this methodology needs the potential to help women by mainly altering unequal social relations of gender and necessity of knowing what kind of information requires in the study. It also probably gives power to a local person's skills and knowledge system especially using a suitable technique like the participatory method within qualitative research. In addition, it empowers the participants and develops the scholars' consciousness in conducting feminist research.

Another central coherence is the questions and reflection of 'who are those prior researchers who conducted a study on this tribe'? There is also not enough feminist work in this indigenous community. Looking from a feminist standpoint, theory using feminist methodology within the qualitative study will generate new knowledge in feminist research among the indigenous community in India. Further, in the context of Tripura, although some scholars have attempted to conduct research concerning tribal studies yet studies on this community from a women's standpoint, the nature and pattern of work they perform in their day-to-day life remain unattempted till now. Therefore, this research will not only highlight women's contribution as homemakers and other wage labour activities but also address the several kinds of family enterprises women economically support, their child's education, and taking care of the older person in the family. Drawing from a theory of feminist standpoint leads to comprehending the lived experience and stories in-depth from an insider's perspective rather than only from the researcher's views.

This research also deserves to address because it not only attempts to highlight women's points of view but also men's perspectives on the family and community of women. Some of the literature revealed that women consume the maximum hours of domestic work compared to male people in the family. Thus, the present study will also identify men's household work share in the family. It further emphasizes the decision-making ability of women and the empowerment they experience

through several activities and opportunities in the community. The state also plays a significant role in policy intervention for indigenous women's protection and development. This study is also significant because it will reach the maximum audience on the issue of women among the Uchoi indigenous community, such as stakeholders, local governance, policymakers, and others. The subsequent, necessary explanation for the need for this research is recognizing the indigenous women participating in political space and their certain rights in sharing ideas and political discourse in the community and state being women.

Nevertheless, using feminist standpoint the questions arise, do all men see the world the same way? Do all men experience privilege in the same way? Do all women see the world in the same way? Do all women experience privilege and oppression in the same way? All these perhaps give an insight into standpoint and how a person's identity relates to power will influence their perception. Adopting this theory, therefore, provides a comprehensiveness of women's experience engaging in taking accountability for mothering, household chores, care work, and other paid work outside the home. Are they valued, identified, recognized, and privileged enough to enjoy social positions as men in society? Is there a share of housework between husband and wife?

Hence, due to this inadequate literature, it is crucial to explore this community's origin, historical perspective, and the lens of women engaged in double-burden work. This research will reveal the similarities and differences in gender aspects concerning women's nature and pattern of work, the division of labour between males and females, and their position in the community from broader society. It will also highlight women's empowerment through various work contributions and abilities in decision-making within the family. This study henceforth seeks attention from a policy intervention perspective on this community, especially among women and their livelihood. The conceptual framework generated in this research offers a new epistemological addition to feminist social science research, especially relevant in the contemporary era. It not only attempts to observe women's lives but also addresses men's perspectives on women's work. Women portrayed as victimized have become common; thus, this current research acknowledges and recognizes indigenous women's empowerment through their participation in the welfare of the family, community, and state. Also, provide a discourse framework exploring multiple realities of the women's social world.

04

Visual and Performing Arts as a Design Research Tool for Interpretation and Accomplishment of Transgender Inclusivity Goals**Keywords: Indigenous Women; Work; Feminist Research**Deeptam Das ¹, Maathangi Venkatraman ², Rizwan Kazmi ¹*(1) Birla Institute of Technology, Mesra, Ranchi**(2) School of Planning and Architecture, Vijayawada, India*

The transgender community in India has been subjected to near complete physical and digital obscurity in terms of socio-cultural representation in the public sphere. Lack of social sensitization in addition to prevailing prejudice has rendered the community constricted in terms of accessibility to basic needs and rights. The lack of societal acceptance has led to a multitude of consequential adversities like access to public transportation, spaces, and cultural avenues. Within the trans community, a large demographic is skilled in performance-based arts. This can be used as an effective tool in gaining a better understanding of the needs, ambitions, motivations, and collective goals of the community for increased socio-cultural visibility and accessibility in the Indian context. The paper argues for visual and performing arts as a transformative research method in addition to the conventional methodological discourses. This paper reports a participatory action project we conducted with trans people in Delhi, India. Using various forms of art, this Participatory action research sought to increase the accessibility and visibility of the Trans community in Delhi's public sphere. We use the term trans as an inclusive umbrella term to refer to people whose genders do not conform to the societal expectations for the sex they were assigned at birth.

Much of the literature on the accessibility of the trans community in urban public spaces is focused on the risks and vulnerabilities of this marginalized population, considering mostly the quantitative aspects of trans demographics. Quantitative research very often limits the subject to choose from a predesigned set of markers/ options in terms of sex, race, relationship status, etc. The pre-sets used, rarely takes into consideration the diversity and differences within the trans community. It further downplays the role of transgenders in their role in communicating their needs, while giving more consideration to the prescriptive, normative discourse model. The nuances of trans identities may not be creditably captured by standard demographic research methodologies. Also, owing to the marginalization of the trans community over a long period, the community has been rendered largely inaccessible to research and data collection groups which account for further discrepancies in the available data.

Secondly, the years of marginalization and societal unacceptance have led to issues of gender dysphoria amongst the trans community leading to under-representation. While qualitative research does exist, they don't adequately represent the lived experiences and personal aspirations of the members of the trans community. This has contributed to inaccurate identification and inefficient analysis of their needs and requirements. This lack of comprehension has led to various shortcomings in the fulfilment of their collective goals. One of the major repercussions of this unfulfillment of their needs is their physical and digital obscurity in the socio-cultural context of India. This paper suggests that art can serve as an additional transformative research tool along with the conventional research methods to gain an in-depth understanding of the concerns of the trans community.

A mixed research methodology is taken into practice to analyse and test suitable design methods

for increasing accessibility for the target community. The quantitative research methodology was used to understand the demographics of the trans communities in the present scenario in terms of education, employment, visibility and representation. A qualitative research methodology was adopted to identify and assess the observations and lived experiences of the members of the subject community. An ethnographic survey was used to gain an understanding of the lifestyle led by members of the trans community. Through participatory action research, Field notes were collected, which form the basis of the database that helped in the identification of the problem. Visual and performing arts were used as a transformative research tool to gain a deeper understanding of the intangible aspects of members of the trans community. The paper is based upon a comprehensive study of interviews, surveys, discussions, mapping exercises, collaborative assignments performed and collected through primary sources. If looked at from a data collection point of view, using visual performing art as a medium will aid in the facilitation of better interpretation of personal thoughts and feelings of the community, which otherwise remains a largely theoretical concept of representation and comprehension. Traditional research methodologies restricted avenues to which visual and performing arts gave access, leading to more cognitive and emotional understanding. In contrast to the conventional research methodologies, the stated novel transformative methodology presented the trans community with an avenue to share their experiences and ambitions, while equipping the research community with a more visceral understanding of the community.

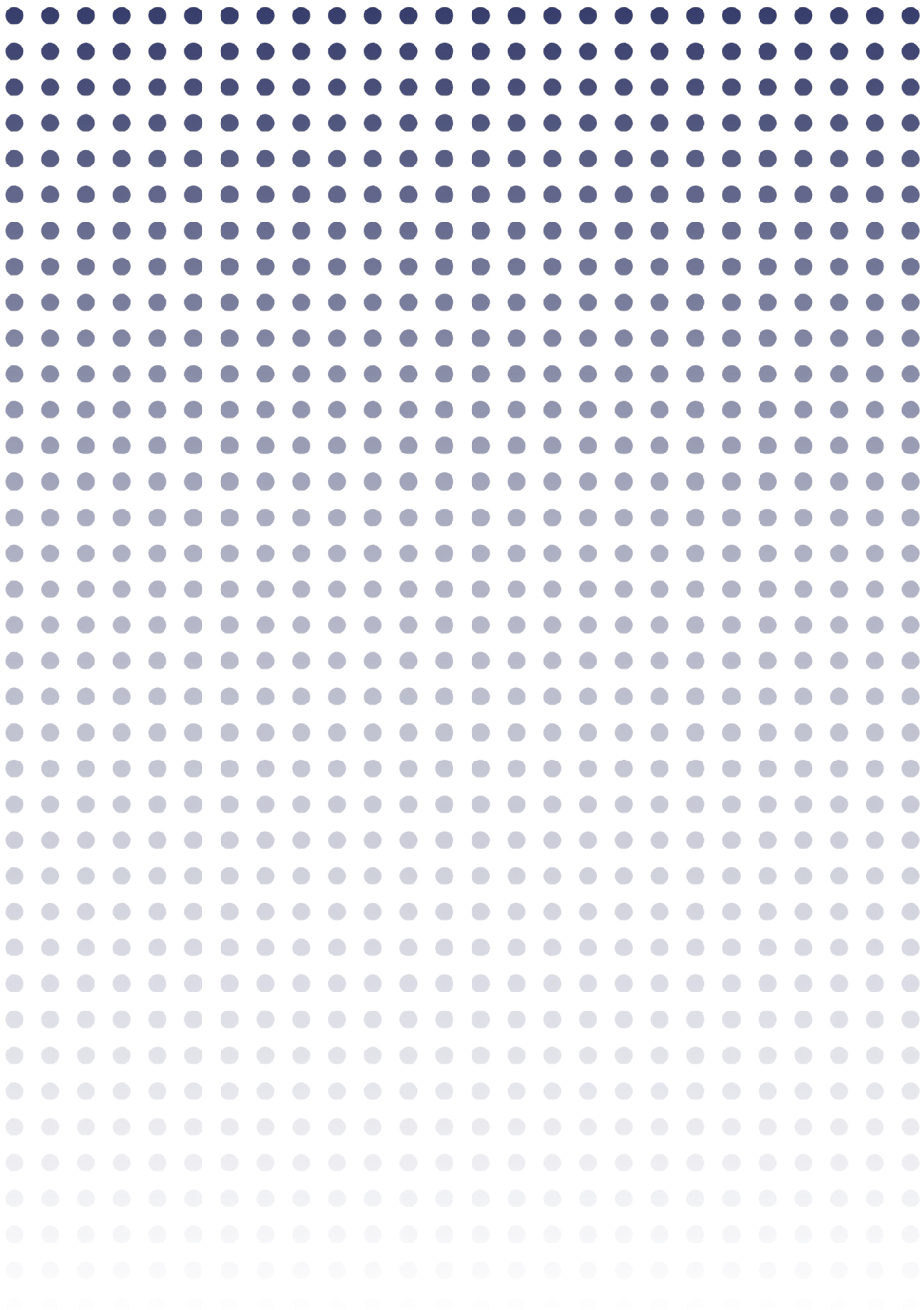
A sample group was selected through a combination of purposive and voluntary sampling. The sample group participated in surveys, interviews, and mapping exercises. The interviews were transcribed and textual content analysis was conducted. This included a systematic analysis of the perceptions, motivations, emotions, and other variables/factors. The outcomes form the basic database to gain an understanding of the factors of discrimination and assess the potentiality of design/ art interventions in achieving the social inclusivity goals.

A case study on the work done by a voluntary group – Pehchaan, was conducted. Pehchaan aims to promote the visibility of the transgender community in Delhi's public spaces. It has actively worked at promoting the visual and performing arts of the trans community. The collaborative design programs have seen active participation from the community and have increased their representation in the public square. A study of their work gives a deeper insight into the need for socio-cultural representation and its implications. This indicates the potential of visual and performing arts as a design methodology.

The implications of the findings of this study were then taken into consideration in formulating and designing methods for enhancing inclusivity and increasing accessibility for the trans community. The study shows a significant jump in the number of subjects as well as their participation in the activities as compared to previous studies. Art as a transformative research tool was responsible for this shift in the paradigm. Collaborative design experiment has played a vital role in the increment. The various forms of visual and performing arts empowered the members of the trans community with an additional platform for activism. The process of artistic creation gave the subjects the liberty to indulge in the process of self-reflection. This enabled them to move beyond the barriers of pre-defined gender identities and generalised perceptions of the community.

With the addition of visual and performance-based arts as a research methodology into the existing realm of qualitative research, we have achieved a better understanding of the intricacies of the behavioural and emotional aspects of the trans community. An in-depth understanding of the nuances of the needs and concerns of the community was possible due to the stated research

methodology. The shortcomings of the existing normative research methodologies have led to a gap in our understanding of the trans community. The paper proposes an exploration of new design methodologies that, when adopted can lead to an efficient identification and fulfilment of their needs. Strategic design methodologies that make use of the artistic capacities of the trans community can potentially act as a tool for active representation and advocacy which in turn will act as a catalyst for increased accessibility and inclusivity. By reconceptualising and reconfiguring the conventional methodological discourses, the research paper aims to use visual and performing arts as a vital tool in expanding the borders of knowledge and representation of the trans community.





SMUS 23_19-02

**Analysing Hidden Forms of Violence and
their Spatialities: The Methodological
Challenges of the Research on Intimate
Partner Violence and Sexualized Violence**

Session Organisers:

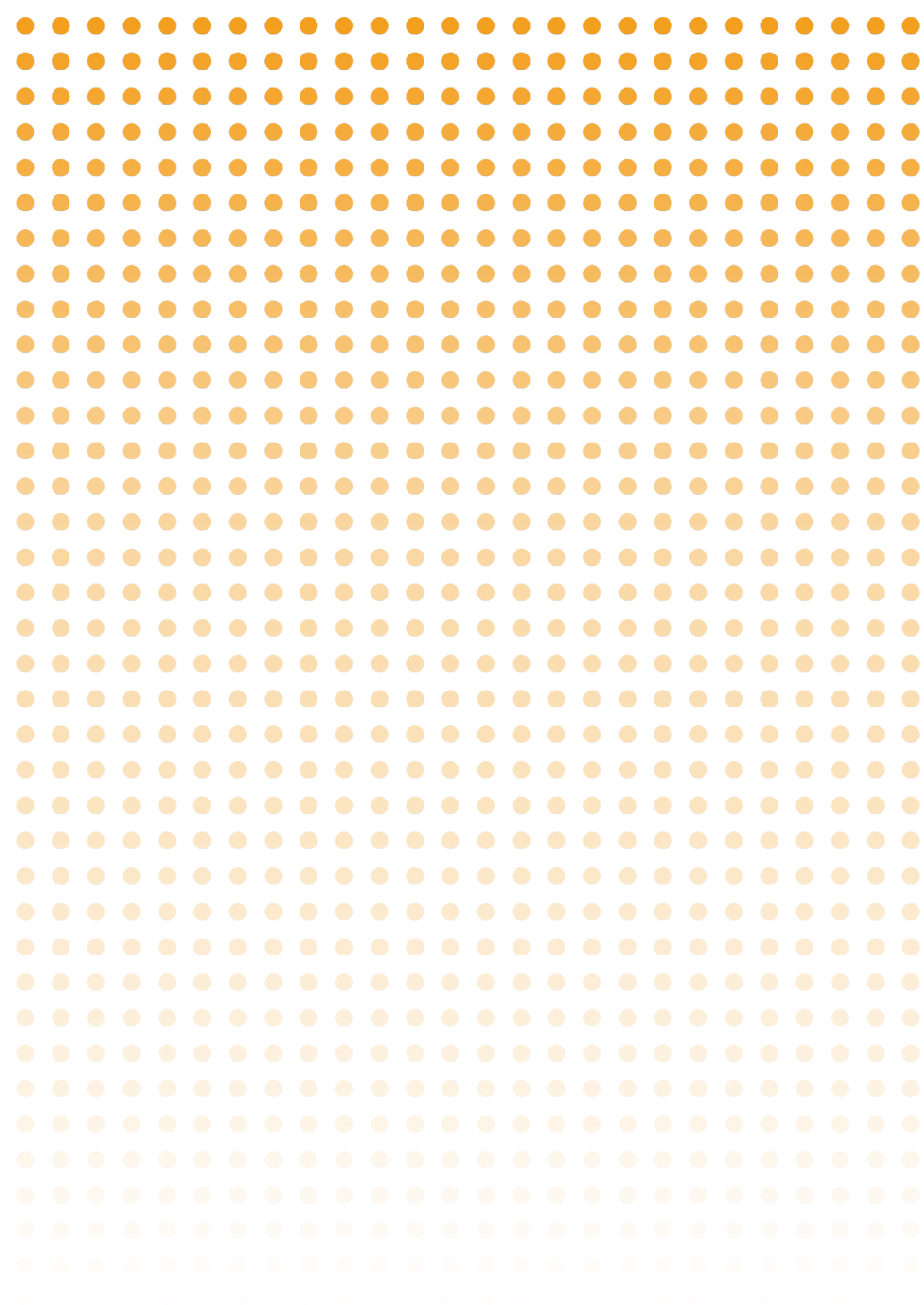
Susanne Nef

Zurich University of Applied Science

Frederike Brandt

PhD Student, TU Berlin





01

Methodological Challenges and Sine Qua Nons for Research on LGBTQ+ Inclusion in Public Spaces**Keywords: Public Spaces; LGBTQ+ Inclusion; Methodological Challenges**Adarsh K. Verma ¹, Devu Rajeev ²*(1) University of Hyderabad, India**(2) Central University of Tamil Nadu, India*

Public spaces, inclusive of all types of people, serve as a great way to promote social relations among the community members. However, when we talk about the LGBTQ+ community, they are often not openly welcomed by the heteronormative population. The existing literature on LGBTQ+ is limited to lifestyle, mental health, and their inclusion in workspaces, but their inclusion in public spaces is largely neglected. The present work discusses the requirements for LGBTQ+ inclusion research, commonly occurring challenges, and the potential steps to overcome identified challenges.

Unlike general methodological issues, LGBTQ+ research adds additional challenges for the investigators. The first one is the restriction of the research problem or framing of very narrow objectives. For example, the researchers addressing the refrainment of LGBTQ+ from accessing public spaces may not consider how their refrainment is reinforcing for the dominant populations (such as heterosexuals), both of which are interdependent/inseparable constructs. Thus, skewed problems can result in flawed evidence.

Sampling is another area that requires more focus. Most often, people from the LGBTQ+ community feel safe behind the “closet” (metaphor) by not revealing their non-normative sexual orientation due to the fear of social exclusion. This “safe behind the closet” mindset restricts the research process to a great extent in the scientific community. The researchers get access to a small portion of this population, such as the research participant who feels safer in “being out.” Along with the heteronormative population, the hidden queer spaces also restrict the scientific community from reaching them. It often questions the sample’s representativeness and validity of the research findings. Accessibility to LGBTQ+ participants within the public spaces is another issue for ecologically valid and emotionally valanced responses because many public spaces are not accessible to this community. However, while reporting it as a challenge, the threat/crime to LGBT participants in public spaces also needs to be acknowledged. For getting LGBT participants into public spaces, their safety needs to be ensured by the researcher(s)/ investigator(s).

“Research focused on identities can be affected by the researcher’s identity,” especially with the LGBTQ+ participants (Sanschagrin, 2011). The identity of the researcher (be it their sexuality, gender, caste, or race) can facilitate or inhibit responses. It could influence the process of obtaining responses and the rapport between researcher and participant. This is yet another challenge. Another prominent issue is the online mode of response collection. Researchers using internet-based surveys to get anonymized responses often limit their sample to the privileged population. These are some significant challenges that are often encountered by researchers in this domain.

Along with the sine qua nons in LGBTQ+ research methodology, the solutions for the above-mentioned challenges are also discussed. First and foremost, the research question formulation should be open to modification. This is because, as we explore further, the data may keep

providing insights that could unveil the crucial aspects of the problem. Restricting the research problem, as mentioned above, can lead to deviating results. With regard to research design, in general, a mixed-method approach is best suited for LGBTQ+ inclusion research. However, other research designs may be more appropriate for specific research problems. Starting the research process with a qualitative method can provide rich information for formulating an appropriate research methodology. During qualitative exploration, interview schedules must be prepared in consultation with experts and community members while emphasizing the participants' sensitivity and other aspects. Performing thematic analysis on qualitative data can provide emerging themes that influence LGBTQ+ inclusion in public spaces, such as occupational factors and forms of discrimination experienced in public spaces. Later, quantitative work can be well-formulated based on outcomes of interviews and qualitative surveys to promote their inclusion in public spaces.

Another requirement for LGBTQ+ inclusion research is data collection at the grass root level. For effective research on this population, accessibility to hidden populations is required. Snowball sampling is an effective technique to access the hidden population. Different geographical sampling techniques and tools (such as Geographic Information System; GIS) can also be combined to select participants from geographically different regions to overcome the problem of sample representativeness. Some other sampling methods that can facilitate such research include respondent-driven sampling, neighborhood sampling, web-based sampling along with venue-based sampling (to reduce participant bias), and cyber-ethnography (Stall et al., 2020).

To overcome ecological validity challenges, studies on LGBTQ+ inclusion in public space locations are recommended. It can also sensitize people about the needs of the LGBTQ+ population and their inclusion in public spaces. Additionally, existing research is primarily conducted in urban areas. Hence, there is a need to focus on the rural LGBTQ+ population. Further, to counter researcher bias in contacting and interviewing participants with different sexual orientations, the researcher(s) should make sure not to make any prior assumptions about how they (i.e., the LGBTQ+ community) perceive or behave in public spaces while formulating the research methodology. Further, the research methodologies should not only focus on experiences in public spaces or people's attitudes towards inclusion in public spaces. The attempt should also be made to understand the public spaces, like the extent of crime risk in particular public spaces. The characteristics of public spaces (research settings) can significantly influence the overall research process.

Apart from methodological aspects, researchers should address the problems encountered during the research process with the LGBTQ+ population, suggest ways to overcome those problems, and recommend improved research approaches. The researchers exploring the inclusion in public spaces should also propose the utilization of their research findings for the general public wherever applicable, how the findings can be contributed to developing better interventions, or their importance in policy making.

In conclusion, the present paper attempts to address the challenges and requirements for LGBTQ+ inclusion research. Considering the above-mentioned points while conducting LGBTQ+ inclusion research can significantly facilitate the overall research process. However, the mentioned solutions might not be applicable to specific/focused objectives. Hence, the researchers need to utilize the suggestions with caution. The addressed *sine qua nons* and challenges aimed at advancing research methodology in "Gender Inclusion in public spaces," a preferred thematic area of the current session of the SMUS conference.

02

Sexual Violence: Ethnophenomenological Analysis of the Experience of Affected Persons

Keywords: Sexual Violence; Ethnophenomenology; Qualitative Research; Phenomenology

Frederike Julia Brandt ¹

(1) Technische Universität Berlin, Germany

Sexual violence is part of the lifeworld of many people. It takes place in different forms in public and private spaces. Which phenomena are identified as sexual violence (e.g. in public or legal discourse) evolves dynamically and in social embedded processes. Apart from the partly dynamic limits of the research object, there is another methodological challenge: Sexual violence is a bodily experience. It is always bodily and corporeal, both on the part of the perpetrators and on the part of the victims. Even in mediated forms of sexual violence, such as through social media, sensuality must be centrally focused at the analysis. Interactions without physical contact can be also important here, such as insults or exhibitionism. The specific type of sensuality and spatiality must therefore be addressed in a differentiated manner. Since sexual violence is always bodily and sensual, special methods and methodological concepts are needed to understand the primarily bodily sense of the experience and to make it available in verbal language for research. Thereby researchers must also fight against the fact that sexual violence is still strongly tabooed in society and therefore often remains veiled. In view of these challenges, I decided to conduct open interviews with those affected, in which the interviewees themselves discuss their experiences, without being pre-structured. The interviews aim to reconstruct the experience of interviewees. Since what has happened is often not accessible for ethnographic observation in copresence, interviews are a good way to (re-)construct the subjective experience, as well as the description of what has been experienced. In this context, I will use the data collected during my M.A. thesis to discuss how to methodically deal with bodily phenomena that partly elude visibility, comprehensibility, and verbalization. In my opinion, a qualitative and inductive approach is necessary to gain a better understanding of sexual violence. Based on the methodological challenges mentioned above, the approach of ethnophenomenology (Knoblauch and Schnettler 2001) is used, which puts subjective sensual experiences thematically into the center. The reflexive attention to the experiences is enacted by the interviewees themselves. In this way, the bodily experience can be analyzed. The contribution to the conference will be a methodological discussion on the perspective that is gained by using an ethnophenomenological approach on researching sexual violence.

03

Depoliticization of Female Body; Cultivating the Spatiality and Temporality of Violence against Women in Contemporary Iran

Keywords: Violence Against Women, Iran; Methodology

Nassim Mehran¹

(1) Charité University, Berlin, Germany

The paper examines violence against women in the context of Iran between 1979 (aftermath of Islamic Revolution) and prior to the outset of the recent feminist movement ‘Woman, Life, Freedom.’ By reviewing the approaches in knowledge production about the violence experienced by women, the article develops an analytical framework through which the complex multi-scale spatiality and temporality of violence against women could be understood.

04

Challenges in intersectional violence research: Insights from the study “Violence Prevention Among Particularly Vulnerable Groups of Survivors Affected by Domestic Violence”

Keywords: Intersectionality; Domestic Violence; Qualitative Research

Olivia Frigo-Charles ¹

(1) ZHAW Zurich University of Applied Sciences, Switzerland

This proposal builds on the findings of a one-and-a-half-year research project at the ZHAW Zurich University of Applied Sciences, which will be completed in autumn 2022. The research project focuses on the intersectional perspective on the interactions of complex causal constellations of domestic violence. This is linked to the aim of addressing the complexity of the realities of life and the complex interplay of risk and protective factors in domestic violence in the course of life. Following the Istanbul Convention – the Council of Europe’s Convention on violence against women – the aim is to gain knowledge of particularly vulnerable groups in order to create a scientific basis for prevention. The focus was placed on the categories of age, ability and LGBTQIA+. However, these categories are not understood in a restrictive way, but an openness in the sense of the intersectional research approach was maintained. For this purpose, a modular approach consisting of literature and secondary analyses, expert interviews, institutional surveys and interviews with survivors was conducted.

In the first part of the talk, the research design will briefly be presented. The focus will be on the qualitative, ethnographic research methods (especially conducting interviews with affected persons). How was the target group reached? Which groups of people were not reached? What explanation is there for why these groups were not reached? What was the interview situation like? Which topics/questions were found to be rather sensitive? How were such questions dealt with?

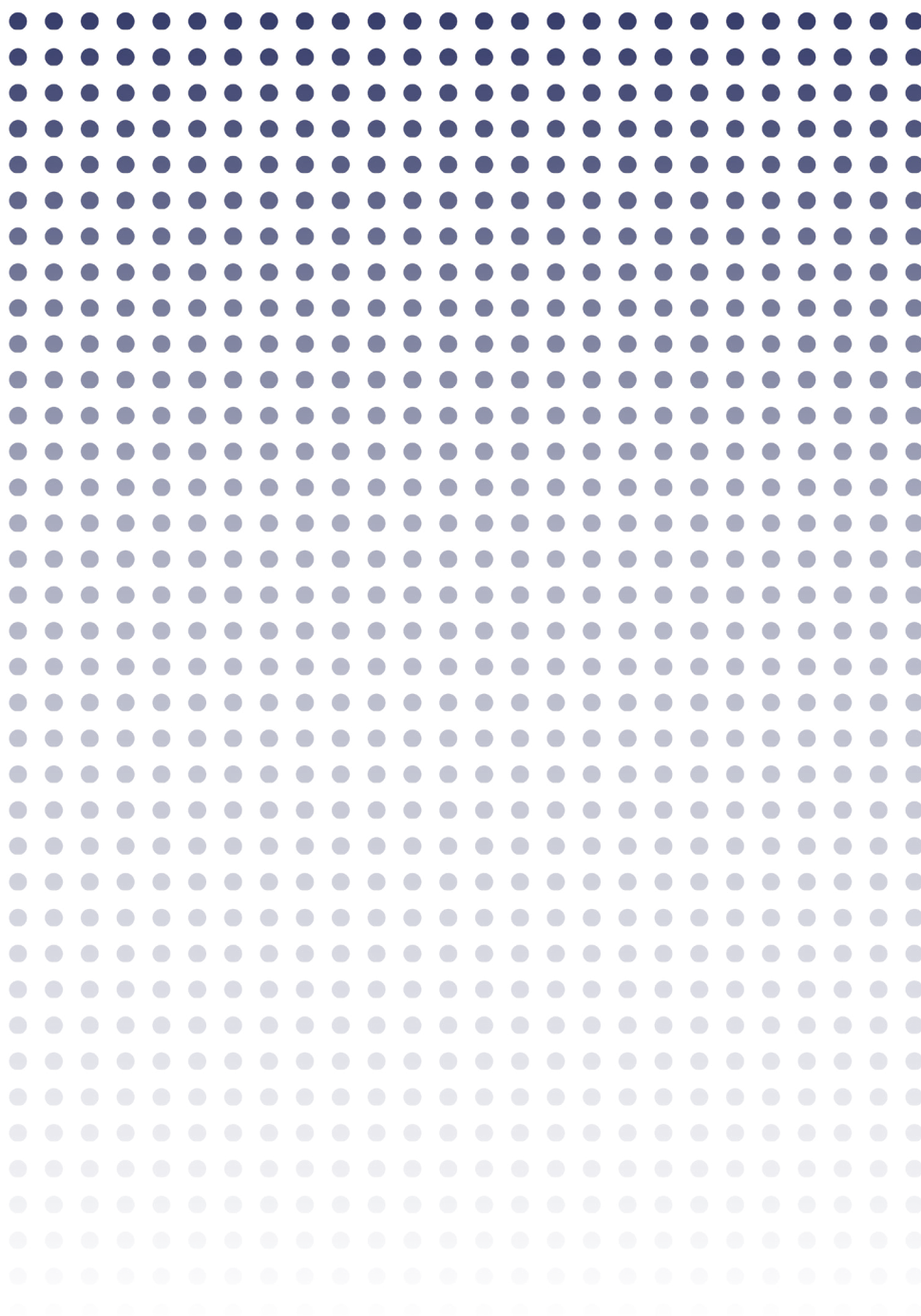
The second part of the presentation will focus on the challenges the research team faced in the process. On the one hand, it will focus on how research with a sensitivity for people with challenging circumstances looks like (keyword: intersectionality) and on the other hand, how (self-)attributions were dealt with. In addition to physical forms of violence, more subtle forms of violence (e.g. psychological violence) were often mentioned (e.g. in a care setting, not engaging with the patient and deciding over their head was perceived as violent, or addressing a trans person loudly with the wrong pronouns). These can vary depending on the circumstances of the person (multiple burdens). Accordingly, it is important to break essentialist definitions of violence and to use a broad concept of violence. This methodological challenge will be addressed in a first step. Here, the talk will directly contribute to the Session topic by highlighting hidden forms of violence.

Another problem is the normalisation and trivialisation of experiences of violence. One interviewee experienced a form of normalisation in the care setting. He repeatedly had to experience pain during care that could have been prevented. In relation to what he perceived as violent, he explained: “That was not so clear to me before, that I am the person who can set the limit. That I can say when it is an assault. Until I came to terms with that, I wasn’t even aware of it. I might have felt in the past that these are things I just have to accept. Just like when I have relatives who help me, for example parents or someone from the care staff, these are things I just have to accept.” Such normalisation narratives could especially be observed in dependency relationships. Another interviewee who experienced sexual violence from her father in childhood, confronted her father at his death bed. She reported: “But my father stayed very cool and said he was sorry that I had

experienced such suffering, but it hadn't been him and he didn't know who had done it. Very laid-back, as if nothing had happened". On the one hand, the normalisation and trivialisation may be carried out by the person affected by violence themselves and on the other hand by the social environment. They may even be confronted with denial as shown in the second example. For methodological considerations, this means that it is necessary to reflect on how such statements are dealt with in interview situations. Why does the person feel this way? To what extent must the researcher distance him/herself and try not to interpret too much into it? As Nef (2020) shows, there are various reasons why there are different definitions and perceptions of violence, for example, different degrees of taboo or acceptance of violence, age and gender of the interviewees or in general the linguistic and communicative competences of the interviewees (p. 43). But also "rememberability, fear, shame and guilt" are limitations of research on violence (Kavemann 2016, p. 51). Drawing on her practical experience in three research projects, she reports that questions about violence and sexuality, for example, are often not asked in interviews because either the researchers are embarrassed or they want to prevent the respondents from being re-traumatised. The presentation will show to what extent such topics were addressed, but in which way attempts were made not to create retraumatising situations (e.g. through a thoroughly thought-out catalogue of questions and repeated reassurance with the interviewee).

Another important observation in this context is the critical use of the term 'victim'. It emerged from the interviews that the term 'victim' was often rejected. According to the literature, the term is often associated with passivity and especially in feminist discourse it is criticised for consolidating gendered power relations (Hagemann-White 2019, p. 150). Among other problematic effects, this negates the fact that men can also be perceived and recognised as victims, which is often a taboo (Kavemann 2009, p. 49). This is a problem that could also serve as an explanation for why in particular women came forward to the research team for interviews. In turn, the terms 'perpetrator' and 'victim' are necessary to claim the responsibility of the community and state (e.g. funds for victim assistance) (Hagemann-White 2019, p. 151). A differentiated reflection of the term is therefore essential for qualitative research on violence.

The talk is intended to provide a framework in which these topics can be discussed following the presentation of the results and challenges of the research project. It should convey that research should be conducted with a sensitivity for complex circumstances of people affected of violence and with a broad concept of violence. Self-attributions must be critically questioned (to what extent are these normative social ideas?) without neglecting to take those affected seriously.





SMUS 23_20

Spatial Methods in Healthcare Research

Session Organisers:

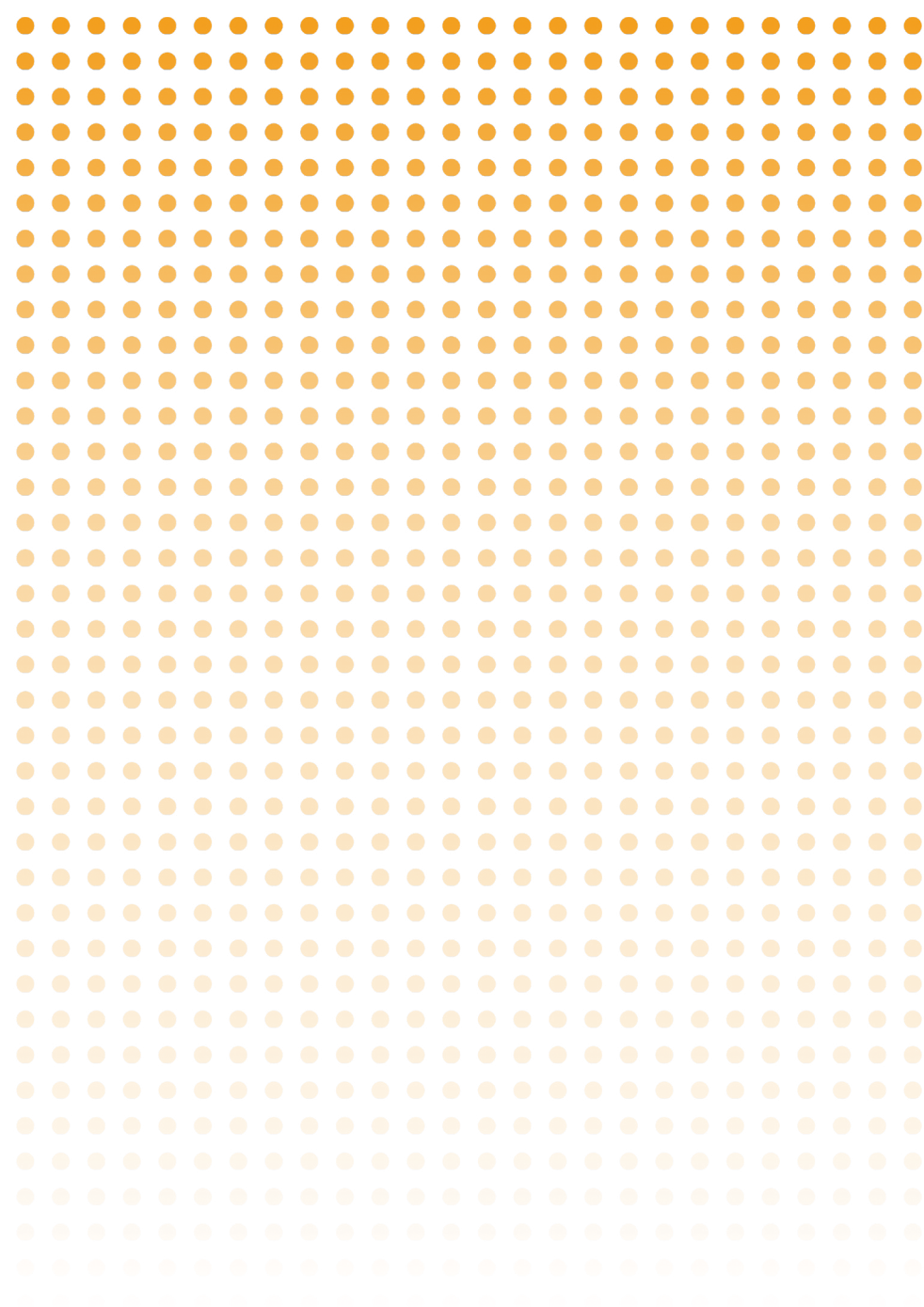
Lorena Dini

Charité - University of Medicine, Berlin

Cornelia Thierbach

Research Associate, TU Berlin





01

Introduction: Space – Spatial Methods – Healthcare Research

Keywords: Space; Spatial Figures; Spatial Methods; Healthcare Research

Cornelia Thierbach ¹, Lorena Dini ²

(1) *Technische Universität Berlin, Germany*

(2) *Charité - Universitätsmedizin Berlin, Germany*

The understanding and operationability of space are evolving. Space is in this sense both: one of the primary categories in sociology and a lens through which to look in research (Fuller & Löw, 2017). Under the influence of the spatial turn since the 1990s, spatial thinking and the analysis of space in the social sciences has intensified. This was preceded by events and transformational processes that started to emerge in the 1970s (Knoblauch & Löw, 2017; Löw, 2015; Million et al., 2022) bringing us to the current conception of relational spatial thinking, that is considered nowadays the state of the art (Löw, 2015). Focusing on space had an impact on theory building and consequently on research methods and research methodologies that could adequately capture and analyze (spatial) phenomena.

The examination of health or disease, healthcare and healthcare systems in spatial relations is well established but debates about space, spatial methods, and healthcare research are not fully connected. On one hand we find it very stimulating to generate new research questions under this lens and on the other hand we consider it even more important, that spatial methods are consciously used, reflected upon, and discussed. This introduction can be viewed as an attempt to do so by discussing healthcare studies either from literature or conducted by the presenters, to illustrate which assumptions of spatial theory have been methodologically implemented in what way and what were the effects observed. We will draw on Löw's sociology of space (2016) and her spatial figures, such as territory, place, paths, networks (Löw 2020).

Probably the most common spatial figure operationalized in healthcare research is territory (i.e. an area or "container"). During the covid-19-pandemic even main stream media used maps to show what parts of the world or of a country has what incident rates. The project "Women 5.0" (PI Lorena Dini) amongst other explored the location of practices for gynecology and obstetrics as well as for family medicine in the Northeast parts of Germany in reference to the sociodemographic factors, e.g. female's population average age. One result was that there is a tendency to have a practice close to the city center or close to the boarder of Berlin, which has an effect on accessibility for patients and their traveling times to the physicians. Other studies focus on the effects of architecture on the healing process. For example, the American Institute of Architects issues healthcare design awards for the best healing places, which obviously suggests that spaces such as hospitals are carefully arranged and thus, socially produced. This can be referred to the spatial figure of place in Löw's terminology. Another area of healthcare research are patients' pathways through a clinic or through the healthcare system either as factual documentation in order to grasp travelling times and barriers or as management tool for process optimization.

To put it in a nutshell: Space matters in healthcare research. The question is: How is it methodically taken into account and with what intention.

02

Need to Relook ‘Access’ to Healthcare Facility: Perspective from Kasaragod district, Kerala, India

Keywords: GIS; Accessibility; Perception; Focus Group Discussion

Anupama K¹, Saikat Kumar Paul¹

(1) Indian Institute of Technology Kharagpur, India

The COVID-19 pandemic was an eye-opener in many ways. Apart from ascertaining the need to brace up surveillance and prevention methods, it pointed out the existing structural weakness in the public health care systems. As we grapple with the pandemic and plod on, one of the most important questions to tackle is the reliability and resilience of our healthcare system at all levels and across all countries. The addressing of this question should start from the basic level of assuring accessibility to healthcare facilities for all and ensuring the definition of accessibility is not merely tied to presence or proximity to the healthcare facility.

On this line, the paper derives its research question based on the health infrastructure crisis that the Kasaragod district in Kerala had to withstand in the wake of interstate border lockdowns and rising COVID-19 cases in 2020. Kerala, the southernmost state of India, has one of the best healthcare systems in the country. The state has also drawn international recognition for effectively containing emerging infectious diseases like Nipah. Though Kerala has a unique status with regard to an efficient healthcare system compared to other states in India, the inter-district disparity is present in the quantity and quality of healthcare facilities. Kasaragod is among the districts that fall in the tail end with regard to efficient public health services. The district, which has a population of 13 lakhs, does not have a functional tertiary hospital to cater to the population. The population depends on the nearby Kannur district in Kerala and Mangalore in Dakshina Kannada district in Karnataka for tertiary hospitals. The doctor-to-patient ratio in Kasaragod is 1:1925, whereas, for the rest of the state, it is 1:300, further highlighting the stark contrast in healthcare services in the district. Apart from deaths due to COVID-19, the district of Kasaragod also witnessed preventable deaths due to other ailments owing to interstate border lockdowns as the hospital of preference could not be accessed. Thus, along with the lack of spatial accessibility to an emergency healthcare facility, and the shortage of advanced healthcare services, it was also the lack of trust and reliability in the existing health facilities in the district that worsened the crisis. Through a case study approach by considering the Kasaragod district in the state of Kerala, we explored the linked set of factors influencing accessing healthcare facilities and interfering with the decision regarding the same.

The concept of ‘access’ in healthcare is most often assessed using the distance-time approach or based on affordability. These variables are significant, but at times, they also fail to capture the real issue. Other important aspects related to demographic, socio-economic, political/institutional, and cultural factors are also critical in the process. These eventually interact with the dimensions of distance, time, and cost and might surpass the same in the final choice of health infrastructure accessed. Thus, access has to be defined by incorporating aspects that cater to the adequate supply of health services and the different factors that influence the final choice of healthcare facility accessed. Access needs to be conceptualized by piecing together the factors that influence the choice, satisfaction of healthcare facilities and reliability in case of emergency. This ascertains the importance of conceiving accessibility to healthcare using a mixed methods approach by spatially gauging the gap in service catchment areas along with understanding the individual level

subjective factors like satisfaction, attitudes, perception and the role it plays. Since the availability of healthcare infrastructure is crucial in the case of health emergencies, the paper considered only those healthcare facilities which are bedded and also function twenty-four hours and seven days a week. The study also categorizes the healthcare facility based on whether it is a private owned hospital or a public hospital. Apart from mapping the healthcare facility in the district, we also looked into the logistics related to health services and the road network aspects which influence accessibility. Thus, along with these structural barriers, the financial, cognitive, and psychological barriers that crop up in determining 'access' to a healthcare facility was assessed in this study.

The health-related studies concerning Kasaragod is mainly in the domain of endosulfan-affected areas and their consequences; the literature on spatial accessibility to the health infrastructure of Kasaragod is scanty. We could find only a study (Sumesh, 2020) that addressed the spatial distribution and service area of healthcare concerning Kasaragod. But the study (Sumesh, 2020) has two main limitations: It has considered only primary health centres and their service areas; as these facilities are not 24X7 available, they fall short in counting for emergencies. Also, the lacunae of not considering the multiple barriers posed by other factors needed to be looked into. Thus, this paper addresses the twin scope of:

1. Mapping the spatial accessibility of 24X7 emergency health facilities and their catchment areas
2. Identifying the factors and barriers with regard to 'access' to healthcare facilities by a bottom-up approach by focus group discussions and semi-structured interviews

The paper deciphers the research question by adopting spatial analysis and incorporating subjective factors through field study. Spatial analysis was carried out using network analysis in ArcGIS. The semi-structured interviews were developed by incorporating the attributes pertaining to the multidimensional aspect of access i.e. availability, acceptability, accessibility, affordability and accommodation by (Penchansky & Thomas, 1981) and also considering predisposing factors, enabling factors and need factors by (Aday & Anderson, 1975). The quantitative approach to assessing healthcare service coverage of bedded hospitals with 24-hour emergency service helped to identify the service gaps. The insights from focus group discussions of stakeholders, interviews with residents helped to understand the factors that shape the final choice of the healthcare facility. Thus, the paper contributes towards developing an approach to assess the 'accesses' to healthcare facilities by considering multiple sets of factors and their influences.

Thus, this paper is a right fit for the session 'SMUSI_20- Spatial Methods in Healthcare Research' as it attempts to relook into 'access' to healthcare by bringing together different factors from a case study-based approach by integrating spatial methods and qualitative data. Using a mixed methods approach, the paper highlights the need to integrate subjective perspectives into understanding spatial accessibility, thus emphasizing the need to look beyond service catchment areas. The perspectives from this research would be thus useful for assessing and understanding the importance of a holistic approach in defining access to the healthcare facility and thus strengthening the health infrastructure network for better preparedness for future disease outbreaks.

03

Spatial Distribution of Urban Population, Population Densities, and COVID-19 Cases in Indian states and Union Territories

Keywords: Spatial Autocorrelation; COVID-19; Conditional Map; Urban Population Percentage; Population Density

Adithya Bandari ¹, Ravi Kant ¹, Shubhajit Sadhukhan ¹

(1) Indian Institute of Technology Roorkee, India

The COVID-19 outbreak was declared a global pandemic by the World Health Organization (WHO) on 11 March 2020 (WHO, 2020). The pandemic has caused around 619.77 million confirmed cases worldwide, with 6.54 million deaths as of 12 October 2022 (WHO, 2022). About 44.62 million cases have been reported in India, with 0.53 million deceased (MOHFW, 2022). Almost 90% of global COVID-19 cases occurred in urban areas (United Nations, 2020). Further, United Nations (2020) states that there is no evidence to determine the association between the COVID-19 spread and population density. The present study analyses the impact of urban population percentage and population densities on the COVID-19 cases per million in 34 Indian states and union territories (UT). The present study has used Pearson's correlation analysis, conditional maps, spatial autocorrelation, and regression analysis to determine the relationship between urban population percentage (UPP), population density (DNS), and COVID-19 cases per million (CPM).

The population and UPP for the Indian states have been projected for 2021 using the incremental growth method based on the Census of India (2011) data. Further, COVID-19 case data has been collected from the Ministry of Health and Family Welfare of the Indian Government (MOHFW, 2022), and the CPM has been calculated for the Indian states and UTs. Pearson's correlation coefficient ($\rho = 0.653$) indicates that the states with higher urban populations are more vulnerable to higher COVID-19 cases in Indian states, while population density ($\rho = 0.226$) has minimal influence. Conditional maps have been prepared using GeoDa 1.20 software. Conditional maps refer to a matrix of maps generated by plotting the geographic features using conditioning variables on the x and y axes (Anselin, 2020). For this study, two conditional maps have been generated as follows:

1. CPM on the y-axis and UPP on the x-axis
2. CPM on the y-axis and DNS on the x-axis

The conditional map for UPP indicates that Maharashtra, Karnataka, Goa, Kerala, Tamil Nadu, Delhi (NCT), Chandigarh (UT), Sikkim, and Mizoram have higher UPP and CPM. Andhra Pradesh (including Telangana), Gujarat, Haryana, Nagaland, and Andaman and Nicobar Islands (UT) have high UPP but low CPM. Jammu and Kashmir (including Ladakh UT), Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Manipur, and Chhattisgarh have less UPP but high CPM. The remaining states register lower UPP and CPM, including Punjab, Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Assam, and Tripura. Similarly, higher DNS and CPM were recorded for Delhi (NCT), Chandigarh (UT), Maharashtra, Kerala, and Tamil Nadu. High DNS yet low CPM has been identified in Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Assam, and Tripura. Karnataka, Chhattisgarh, Sikkim, Arunachal Pradesh, Manipur, Mizoram, Jammu and Kashmir (includes Ladakh UT), Himachal Pradesh, and Uttarakhand. Finally, Rajasthan, Gujarat, Madhya Pradesh, Andhra Pradesh (including Telangana), Odisha, Meghalaya, Nagaland, and Andaman and Nicobar Islands (UT) depict lower density and CPM levels.

Further, spatial autocorrelation and regression analyses were used to determine the spatial association between UPP, Density, and CPM. Spatial autocorrelation is an inferential statistical tool applied to understand the spatial distribution of features (Griffith, 1992). Global spatial autocorrelation refers to the measure of spatial dispersion or clustering. Local spatial autocorrelation measures the clustering at each feature level. Moran's I is a measure of global spatial autocorrelation that includes the calculation of cross-products of mean-adjusted values, which are geographic neighbours. Moran's I index values range from -1 to 1, where a negative value indicates the dispersion, a positive value indicates the clustering, and a zero value indicates the randomness (Griffith, 1987). Positive Moran's I value indicates the clustering of high values around high values, and low around low. Negative values indicate that high values are clustered around low values. The value of zero indicates that the localities are randomly distributed. The present study has used the Local Indicators of Spatial Association (LISA) on GeoDa 1.20 software for spatial autocorrelation (Anselin, 1995). Univariate local spatial autocorrelation has been performed for CPM, UPP, and DNS.

Five Indian states have been clustered for CPM. Rajasthan, Bihar, and Jharkhand are the three states that depict low-low clustering, while Karnataka depicts high-high clustering. Tamil Nadu represents low-high clustering. All the five states are significant at the 5% level ($p\text{-value} < 0.05$). The global spatial autocorrelation Moran's I has been identified as 0.138, indicating that the Indian states depict clustering (high CPM states with high and low CPM with low). The results are significant at 10%, with a $p\text{-value}$ of 0.093 and a $z\text{-value}$ of 1.423. Four Indian states indicate clustering for the Urban population percentage (UPP) for the spatial autocorrelation. Uttarakhand, Uttar Pradesh, West Bengal, and Jharkhand are the four states that depict low-low clustering. All the four states are significant at the 5% level ($p\text{-value} < 0.05$). The global spatial autocorrelation Moran's I has been identified as 0.265, indicating that the Indian states have a clustering (high UPP states with high and low UPP with low). The results are significant at 5%, with a $p\text{-value}$ of 0.015 and a $z\text{-value}$ of 2.388. Haryana is the only Indian state depicting low-high clustering for population density (DNS) for the spatial autocorrelation, significant at the 1% level ($p\text{-value} < 0.01$). The global spatial autocorrelation Moran's I has been identified as -0.001, indicating that the Indian states and UTs have a random distribution of the states. The results are not significant at the 5% level, with a $p\text{-value}$ of 0.233 and a $z\text{-value}$ of 0.300.

The regression analysis has been performed to test how UPP and DNS influence the CPM in Indian states. CPM has been considered the dependent variable, and two regression models were developed using GeoDa 1.20 software, one with UPP (model 1) and another with DNS (model 2) as the independent variable. The first regression model uses the null hypothesis that UPP has no impact on CPM. The regression model has generated a moderately strong R^2 value of 0.426. F-statistic was around 23.784 with $p\text{-value} < 0.05$, indicating that regression model is significant at 5% level. The beta coefficient of the UPP has been estimated as 1340.96, with a $p\text{-value} < 0.05$. The intercept of -4654.9 has been identified as not statistically significant at the 5% level. It has been observed that urban population percentage (independent variable) alone could predict the variation in COVID-19 cases per million (dependent variable) by 42.6 %. The results also describe the similar association identified by Tamrakar et al. (2021) at the district level. The second regression model uses the hypothesis that DNS has no impact on CPM. The regression model has generated a weak R^2 value of 0.051. F-statistic was around 1.727 with a $p\text{-value}$ of 0.198, indicating that the regression model is not significant at the 5% level. The beta coefficient of the DNS has been estimated as 5.39, with a $p\text{-value}$ of 0.198. The intercept of 5.39 has not been identified as

significant at the 5% level. It has been observed that population density (independent variable) does not impact the COVID-19 cases per million (dependent variable) significantly. Population density is not a significant determinant of COVID-19 cases at the state level. Although United Nations (2020) states that there is no evidence to determine the association between the COVID-19 spread and population density, multiple studies find a moderate correlation with population density in Malaysia (Bee Aw et al., 2021) USA (Wong & Li, 2020), India (Bhadra et al., 2021), Japan (Kodera et al., 2020). Similarly, a strong correlation has been observed in Malaysia (Ganasegeran et al., 2021), the USA (Sy et al., 2021), Algeria (Kadi & Khelfaoui, 2020), Turkey (Coşkun et al., 2021; Sencuk et al., 2021), and Brazil (Pequeno et al., 2020). However, it is essential to note that these studies predominantly focus on the city (or) district as a unit of analysis. With a state (or) union territory as the unit of analysis, population density does not have a significant relationship.

At the district level, Tamrakar et al. (2021) have identified that urban population percentage and population density positively correlate with the COVID-19 infection ratio. However, the present study establishes that only the urban population percentage has a significantly moderate relationship with COVID-19 cases at the state (or) union territory level. In contrast, population density does not have any significant relationship. It is important to note that previous studies have predominantly focused on the city (or) district as a unit of analysis. With a state (or) union territory as the unit of analysis, which accounts for large populations and areas, only urban population levels have been identified as a significant variable with moderate influence. In contrast, population density is not a significant independent variable. This study helps policy planners, decision-makers, and administrators understand the pattern of pandemic spread for preparing effective policy frameworks to manage health infrastructure and capital.

04

Layering Digital Perceptions: Mandatory Covid-19 Vaccination Operation and Post-Covid-19 in Lesotho

Keywords: Elite Theory Of Power; Ubuntu; Hesitancy; Retrenchment; Vaccination

Matlotlisang H. Tjabaka-Mokapane ¹, Masemote G. Molale ¹

(1) National University of Lesotho, Lesotho

Reports reveal that two years ago, a countless cases of covid-19 were reported across the globe. Lesotho was one of the few last African countries that were reported to have cases. Between December 2020 and February 2022, high mortality rate was reported due to covid-19: people from different calibre died due to the pandemic. For this reason, different countries worked tirelessly to ensure that their nations are/were vaccinated. Following other countries, the government of Lesotho also introduced covid-19 vaccination, which at first, was considered to be voluntary; however, at the later stage, it became mandatory. The vaccines are said to be the most essential public health intervention to prevent the spread of infectious diseases. In spite of their importance, in the countries like Lesotho, some people were complaining and ignorant when it comes to covid-19 vaccines phenomenon. Some of the Basotho stated that they were not ready to vaccinate. Their hesitancy and ignorance were due to lack of communication, so the issue brought divisions of perceptions amongst the nation: vaccinated versus non-vaccinated groups.

Communication is one of the important processes in human life. Nonetheless, it seems to be taken for granted. It is defined as the process that enables “effective and productive human interactions and engagements” (Albalawi and Nadeem, 2020:68). Communication is done in order to establish commonness with communicates. This implies that through the use of language, which is the most common tool of communication, a communicator tries to negotiate, share knowledge or information or idea, as well as attitude through suitable channel or media. Language can either build bridges of human relations or destroy them by separating them from each other. In line with covid-19, the government of Lesotho had spread the message about the covid-19 using various modes of communication including verbal and non-verbal communication. Therefore, it has been observed that through the Basotho’s reaction, attitude and ideas about covid-19, the nation was sensitised about the covid-19 pandemic: its regulations and restrictions. However, to a certain extent, as their cultural practices, including, funeral and bereavement superseded the regulations. Despite the covid-19 awareness to the Basotho nation, when it comes to the issue of covid-19 vaccination, one would identify miscommunication or language barrier and power dimension. Following the Public Health (Covid-19) (Risk Determination and Mitigation Measures) (Amendment) (No.4) Regulations, 2021, unvaccinated individuals were to be denied access to services, in particular, health services, which was their right. Learners/students, teachers and employees were forced to vaccinate. The questions that remain are: Was communication effective enough in sensitisation of the Basotho nation on vaccination if there was any awareness campaign? Why were some of the people in Lesotho hesitant to vaccinate for covid-19? Few months before the general elections, the government announced the suspension of the covid-19 rules and regulations, which raise suspicions. The question is, what were the Basotho’s views on the suspension of the covid-19 rules and regulations?

Drawing from political and cultural perspectives, the present study, therefore, intends to investigate the Basotho nation’s perceptions on whether they have been sensitised on the implementation of

covid-19 vaccination or not. It also seeks to find out the reasons for the Basotho's hesitancy to vaccinate. In this study, the public space, that is, the Basotho nation's views on the suspension of the covid-19 rules and regulations are further examined. Moreover, this study seeks to demonstrate how digital perceptions can be deduced as netnography methodology in a contemporary Lesotho. The study is framed by the Elite Theory of Power and Botho (Humanness) Theory. From the political and cultural point of view, the Elite Theory of Power advocates that societies are governed by the groups of people referred to as elites, forming minority in the society. Within this theory, majority is not part of political decision-making. Again, the elites are unified while the non-elites are powerless and diverse. On the other contrary, Botho Theory posits the following, inter-dependent (I am because we are), inclusivity (botho calls for respect and dignity) and inter-subjectivity (centres on the relationship between certain individuals and the collective). Generally, the theory accounts for human rights and dignity.

The paper is a qualitative ethnographic research in nature. Ethnography research focuses on cultural aspects such as language use. Ethnography research does not only concentrates on the language use, but it also centres on a widespread of cultural aspects, such as, rituals, ceremonies, relationships and artefact. It enables the researcher to decide what to include and exclude, what to highlight, what to report first and last, what to interconnect; and analytic choices are made continuously. Traditionally, ethnographic study was conducted by a sole researcher in a specific geographic location. However, there is a shift since there is an increase of studies in virtual communities where data can be collected from netnography data, an open-ended observation. Due to popularity of social media or use of internet, some scholars have affirmed that data collection from virtual communities is growing. Netnography is 'a qualitative research approach that adapts the traditional ethnographic techniques to the study of the "net" that is the online communities, practices and cultures formed through computer-mediated communications' (Addeo, Paoli, Esposito and Bolcato, 2019:2). Netnography, also known as digital or online ethnography, is less time-consuming. Netnography data involve collecting data about an ethnic group without actually observing the participants, and it is accessible to everyone. However, literature argues that it requires a set of skills on choices about the sites and decisions about type of data to gather and analyse. It also has a feature of being less intrusive; as a result, the researcher can document explicit language or communication of the participants without being at a risk of intrusiveness and disturbance.

The netnography, being a qualitative research design, enabled the researchers to get deeper insights of a certain phenomenon. Therefore, the researchers were able to have a closer look at the issue of covid-19 vaccination and covid-19 vaccination to better understand if the vaccination process was effectively communicated to the Basotho nation to ease the process and whether the whole phenomenon was politicised. The researchers espoused both digital and relational ethnography where the former enabled the researchers to collect data from the desk: Lilaphalapha Page on Facebook. This page is used mostly by the Basotho nation from different districts, ages, religion, calibre and cultural backgrounds; and it is one of the popular page on Facebook that is not affiliated by any political issues. Again, the design was applicable as the researchers accessed the data at a short period of time from the Basotho nation. As for the relational ethnography, the researchers were a participatory observer; as a result, they studied their communities that the +AS5y live in. The results reveal that the government of Lesotho was not ready for vaccination, and that the health-care workers seemed to have insufficient knowledge about the covid-19 vaccination. As a result, the nation was also ill-informed and had inaccuracies. To hide its incompetence, the government of Lesotho forced the nation to vaccinate. Failure to do that, the Basotho were threatened to be

retrenched and denied access to some of the essential services including health services. The study also depicts that people were reluctant to vaccinate because of fear, religion, lack of knowledge, lack of trust in covid-19 vaccine and doubts on how the government handled the matter. The study concludes that the government's action is anti-ethical to true ubuntu humanism; therefore, violates human rights. It also discovered that the issue of vaccination was highly politicised, which is why the former prime-minister and the fellow cabinet ministers suspended covid-19 rules and regulations to ease political rallies and campaigns. The study further concludes that netnography is not only central to discussion of inquiry or online conversations, which reveal the consumers'/ participants' behaviour, knowledge and experiences; but it also enables the researcher to access the research participants in a space where they are comfortable and at their convenient time; unlike the relational ethnography, where the researcher meets the participants physically. Therefore, netnography is indeed less time-consuming. Again, this study offers an opportunity to make a comparison between netnography and relational ethnography on what is more appropriate in the contemporary world.

05

Behaviour Mapping Approach for Identifying the Barriers to Inclusive Outdoor Physical Activity for Women in Public Parks

Keywords: Outdoor Physical Activity; Behavioral Mapping; Public Parks; Women; Inclusive Green Open Spaces

Nagabhoina Tejendra ¹, Gaurav Raheja ¹

(1) Indian Institute of Technology Roorkee, India

The World Health Organization recommends a minimum of 150-300 minutes of moderate intensity aerobic physical activity or at least 75-150 minutes of vigorous-intensity aerobic physical activity per week for adults of age between 18-64 years. Studies have indicated that adults in Indian cities have lower levels of physical activity than the recommendations by WHO. Some of the widely listed reasons for lower physical activity among people are lack of time, lack of motivation, lack of inexpensive facilities, and lack of a conducive built environment. The lower physical activity levels are associated with many communicable and noncommunicable diseases in adults affecting their physical and mental well-being. The physical activity can be performed both indoors and outdoors and it can be a structured or unstructured physical activity. Studies have recommended Outdoor physical activity over indoor physical activity because activities such as walking, running, and playing outdoors and especially in the presence of nature are proven beneficial for the overall health and wellbeing of people. The built environment plays an important role in providing opportunities for people to have access to aerobic physical activity in the natural environment. Urban Public parks are outdoor public spaces usually meant for providing people with recreational activities that include spaces for outdoor physical activity. The per capita green open space in Indian cities is less than the recommended value of 9 square meters per person and there is already a space crunch in the major cities. The existing public parks are either used by one dominant gender or age group and lack the incorporation of marginalized user groups such as women. The increasing population and changing lifestyles of people are demanding an inclusive green open space where more user groups will have access to outdoor physical activity in public parks. This study intends to understand the usability of public parks for women with a focus on identifying the barriers to their spatial usage. A spatial behavioral mapping approach is used to identify the public park usage patterns of women for their physical activity. Spatial behavioral mapping is a less famous method in urban design research in India and it has the potential to identify the relationship between the design of a space and its usage by people. This study identifies two public parks in two neighborhoods of Bangalore City in India and conducts the research by using the spatial behavioral mapping method which includes a combination of structured observations and mapping of activities. The results of this study identifies and discusses the spatial design barriers to physical activity of women in public parks and highlights the possible strategies for enhancing the situation. The research and its methodological approach will help in identifying and mitigating physical activity challenges in public parks for women.

06

COVID-19 and Cities: The Debate on Density and Survival of the Cities

Keywords: COVID-19; Cities; Agglomeration; Density; Networking

Pratik K. Singh ¹

(1) University of Hyderabad, India

Around 4 billion people, or more than half of the world's population, currently reside in cities. By 2050, it is expected that the more than two thirds of the world's population would do the same. Recent studies have shown that 600 cities account for two thirds of the world's GDP. Cities that are densely populous, highly connected, and serve as engines for international trade and transportation might increase the danger of a pandemic. (Desai, 2020).

The extremely infectious disease Covid-19 has raised serious public health issues around the world. Living in highly crowded regions, such as large or metropolitan cities, increases the likelihood of coming into close contact with people and is thought to accelerate the spread of any contagious diseases. So, the COVID-19 pandemic has brought the core feature of cities i.e., density under question. But the point is that density alone does not explain the spread of COVID-19. One Covid positive Kerala fellow came from Wuhan and then onward virus spread in India, so one can say It indicates that connectivity also play same role and even has a greater impact on the spread of the outbreak but the fact is that will you stop the transportation, railways, airways, all these connectivities at the cost of growth, the answer would be definitely NO because nowadays our economy is a cart which runs on the wheels of these connectivities and transportation. If you do so, then you will end up with enormous loss of the economy. So, between density and networking economies, Latter will always be there and can play the same role as density. Some literature argues that the COVID-19 crisis long-term urban consequences may not be connected to population density. Instead, connection is expected to be disrupted, particularly in 'relational cities' that rely heavily on intermediate services and worldwide exchanges. (Hesse & Rafferty 2020). However, Networking cannot be decried because Industrial revolution, rail road revolution, Krugman model all these are strictly based on networking economies. Transport has been the major factor in growth in cities and one cannot blame transport and connectivities for COVID because you have to go for vaccination, metro planning, infrastructure, scientific advantage, and better governance. As Rostow says it is the biggest element in take-off of a country. Therefore, networking and density both have to go together and both are non-negotiable.

It's important to recognize that lowering density will lower economic production and livelihood opportunities. Density promotes creativity, lowers pollution, and gives people access to amenities (Duranton and Puga 2020). According to Somik Lall from his study, raw estimates imply that developing countries benefit greatly from urban density, which is roughly 5 points greater than developed ones (Grover et al. 2021). Economists have also demonstrated that cities drive productivity over decades of research. Cities enable residents to better match with employment, resulting in higher salaries, by bringing people together. This contributes to a strong link between urbanisation and income. Cities are also more environmentally friendly. Compact space promotes more efficient public transportation, lower carbon emissions from private vehicles, and less encroachment on rural areas. Poorly managed density leads to urban sprawl, forcing people to commute longer distances to work and adversely affecting the main characteristics that make cities

profitable.

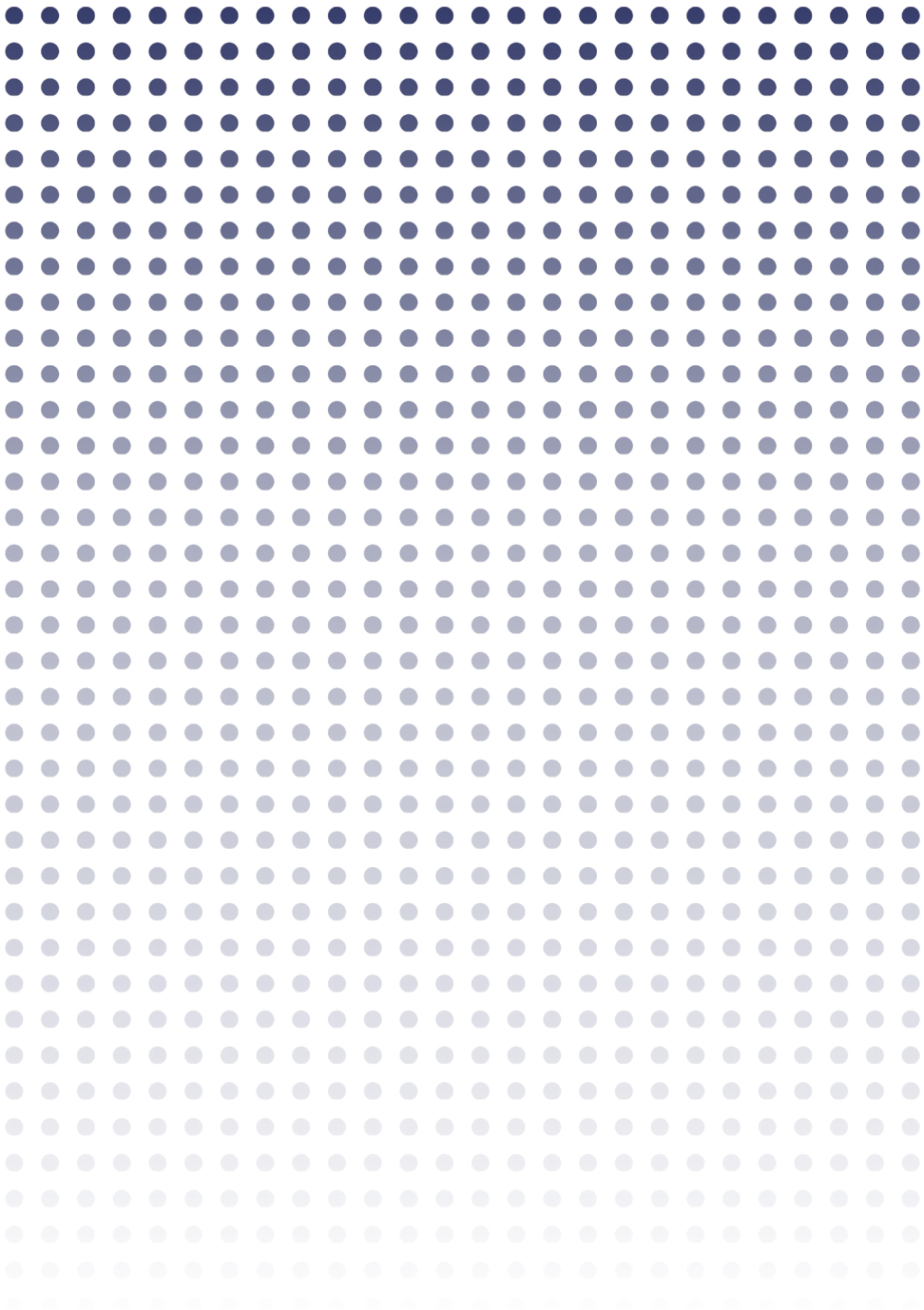
Following a cholera outbreak in London in 1854, cities began to establish water and sewerage networks, resulting in a significant shift in the city's physical structure. Today's COVID-19 pandemic warrants similar efforts in numerous places throughout the world. Cities that provide better public services, such as water, sanitation, and healthcare, can reduce the number of infections and deaths. One lasting lesson is that the expense of the outbreak has been linked to urban inequality rather than urban density so far. While the effects are most severe for low-income families and minorities, they have a significant impact on all of us. (Duranton and Puga 2020).

In this empirical research, I am examining for Covid-19 impact on cities that how much density and networking with other independent variables determine the death rate, infection rate and recovery rate in cities of India. I'll take district wise as well as state wise data and divide these areas in three different strata like one is areas with more than 75% urban, second is areas with 50%-75% urban, third is areas with 25%-50% urban. The natural log of confirmed coronavirus cases per 10,000 people and the natural log of confirmed fatalities from COVID-19 per 10,000 people, both at the district and state levels, will serve as our outcome variables. Because the virus has spread widely, we employ rates and the Standard equation model (SEM) using linear regression models. Both of the outcome variables had exponential variation, thus we converted them into log to get them closer to normal distributions. We use the population of a metropolitan region as a proxy for the connectivity of the counties that make up the metro area. This is consistent with how urban regions are described. Data sources will be COWIN portal maintain by IIT Hyderabad and census 2011.

So, Covid-19 has exposed the vulnerability of cities and municipalities but covid doesn't tell that density is a bad thing rather management of density is a parameter that we have not performed well. Density has got a role. So, our role is to manage density with adequate development of infrastructure, financing system, and urban poor. Cities that can best learn from and capitalise on this experience, not only after it has occurred, but also while it is occurring, will be better prepared for a future health catastrophe (Acuto 2020; Keenan 2020). In terms of governance and community-based decision-making, they may have a significant advantage. Our cities should be prepared to take care of pandemics and disasters while serving as engines of growth. India shouldn't commit the mistake of blaming density in the process not taking agglomeration. So, Pandemic outbreak and its severity depends upon the state of public services, the state of preparedness, the nutrition of the poor, the access to services, their morbidity and co-morbidity condition and capability of government to tackle pandemic rather than density.

UN-2020 report on COVID-19 suggest that local government to be strengthened. It recommends three crucial steps. 1. Addressing inequalities and development gaps; 2. Strengthening local actors' capacities, particularly local governments; and 3. Pursuing a green, resilient, and inclusive economic recovery. As a result, cities must be rethought and transformed in order to better respond to the reality of COVID-19 and potential future pandemics, as well as to recover more quickly, by constructing more resilient, inclusive, and sustainable cities.

This paper considers human-spatial interactions in cities in terms of density and the rapid pace of changes in urban areas.





SMUS 23_21-01

**Methods for Analyzing the Economy 1:
Rural-Urban-Relations, Spatial
Transformations and the Economy**

Session Organisers:

Nina Baur

TU Berlin | Director, GCSMUS

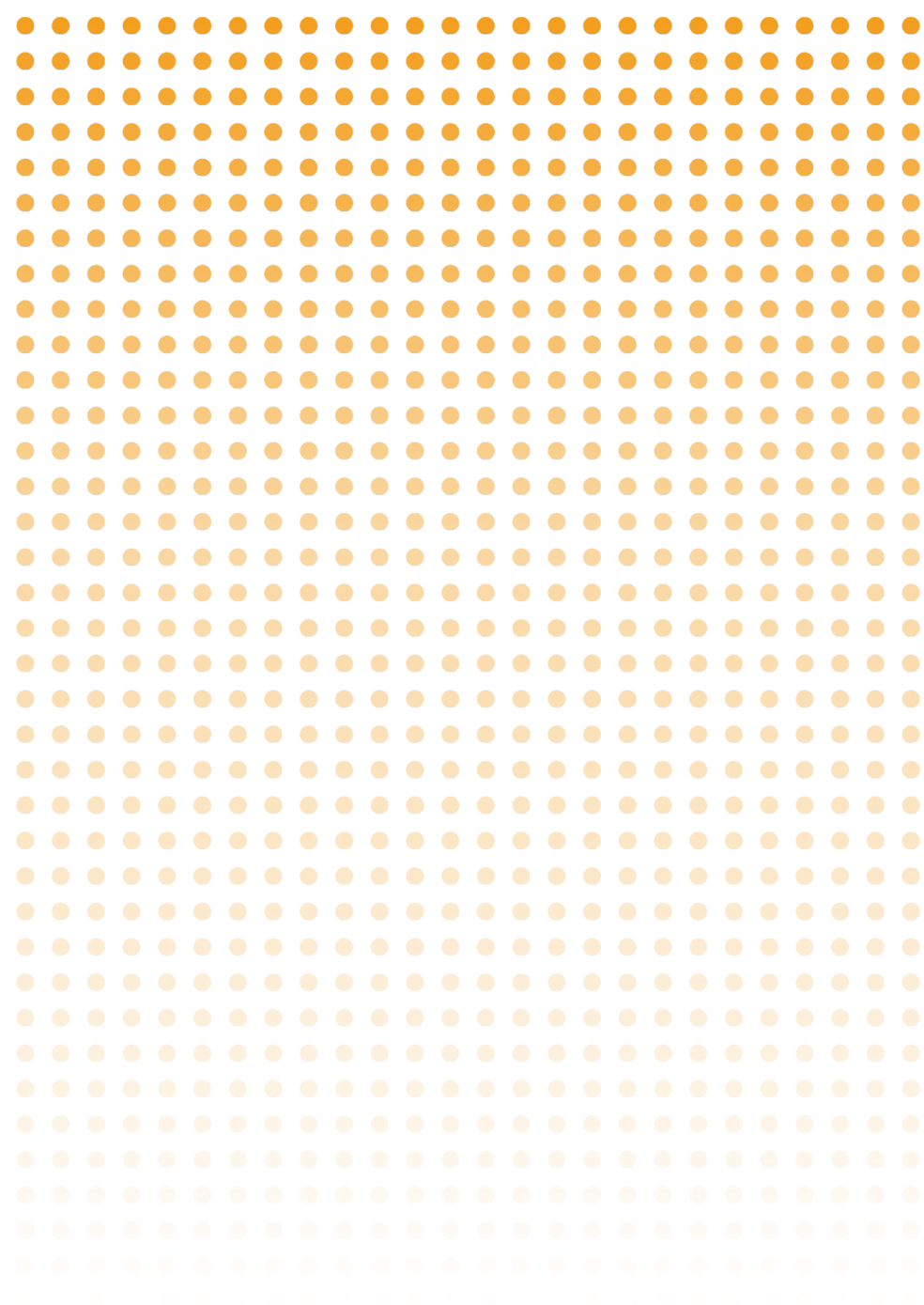
Jakob Engel

Research Associate, TU Munich

Elmar Kulke

Humboldt University of Berlin





01

(Re) Searching Interdisciplinary and Methodological Frameworks to Bridge the Gap in Planning, Industrialization and Urbanization**Keywords:** Urbanization; Industrialization; Spatial Analysis; Oral History; GISPritpal Randhawa ¹, Rachna Mehra ¹*(1) Dr. B. R. Ambedkar University Delhi, India*

Henri Lefebvre's 'social production of space' laid the conceptual triad for understanding philosophy of space and human subjectivity or relating interventions in space to everyday lived experience. The spatial practice (perceived space), representation of space (conceived space) and representational space (lived space) differentiated the idea of absolute space from socially and historically produced space (Lefebvre, 1974:38-39). From the mid 1980s onwards, diverse disciplines have taken the dialogue further to discuss space 'metonymically as ("spaces of language"), introspectively ("spaces of the self"), socio-politically ("spaces of agitation"), culturally ("spaces of modernity") or aesthetically ("artistic and architectural spaces")' (Million, Haid et al 2022:2). While the discourse on space has received much attention in disciplinary domains, the focus on an interdisciplinary dialogue or defining methods that cut across disciplinary boundaries in order to understand spatial practices is still evolving.

The field of urban studies has played a significant role in breaking the disciplinary silos and opening avenues for developing an eclectic methodological framework suited to particular research questions. Presently any exploration on urban issues more or less adapts, adopts or integrates conventional methods drawn from existing fields of established disciplines. A significant variation to this methodology is the 'PEAK urban interdisciplinary disposition' which proposes an 'inquiry into city futures' reconciling 'the sciences of prediction and projection with culturally sensitive readings of the institutional architectures and urban contexts' which 'mediate specific technological disruptions' (Keith et al 2020:1). PEAK is an acronym that synthesizes 'the sciences of prediction and projection (P) that uses the potential of new forms of interoperable urban data analytics' to 'Emergence (E)', combination and material cities and complex systems 'Adopting (A) innovative and metropolitan commensuration' for 'Knowledge (K) exchange and urban (co) production'. Hence data analytics in conjunction with historical scrutiny, political economy and cultural thought process provide 'multiple scaler (social, spatial, ecological economic, material, political)' understanding of city trends.

Taking cue from the emerging methodological interventions, this paper will elaborate how conceptual framework, approaches and methods interact in studying urban change in an industrial town of Ghaziabad situated in north India. There is a notable scholarship on trends in industrialization in pre- and post-independent India. At the same time, there is significant literature on towns having small and medium scale industries. While the scholarship on industrialization focuses on deciphering the pattern of industrial growth, the research on towns with small and medium scale industries is centered on comprehending the nature of urbanization and challenges faced by them. A closer look at these studies suggests that there is a paucity of scholarship on understanding the interrelation between industrialization, urbanization and urban planning. Moreover, a significant number of studies are based on quantitative research methods which analyse population data, economic census, demographic survey, national sample survey and information published by the government departments. No doubt, the quantitative analysis drawn

from macro-data is an important source for providing a larger framework for studying cause and effect relationship but this normative understanding often overlooks other pertinent issues resulting from underlying socio-economic-political processes.

As far Ghaziabad is concerned, it has mostly been analyzed through the framework of ‘peri-urban’. Though this understanding is important, it limits the analysis within the attributes of a framework. The proposed paper moves beyond this understanding by altering the approach and methods of inquiry and will argue that the present challenges of this city are rooted in the post-independent history of making it an industrial town. The paper maps the socio-spatial transformation of Ghaziabad by using the lens of industrialization, urbanization and urban planning through interdisciplinary approaches and methods. It argues that industrial urbanization of Ghaziabad has been distant from the aspirations of modernity envisioned by its makers resulting in its chaotic growth with manifold problems pertaining to sustainability and social justice.

The paper will draw insights from interdisciplinary approaches of political economy, historical study of cities and spatial analysis with a combination of related methods. The political economy perspective through the analysis of secondary material on modernity and economic growth will be used to examine the process of making an industrial town. Archival research will be employed to trace the process of industrial development and look for town planning policy and the oral history method will be useful to capture the life histories or document the lived experiences of people in the background of physical, social and economic transformation of Ghaziabad since India’s independence. The spatial analysis through the usage of GIS and other similar techniques will help in identifying the pattern of land use and land change in Ghaziabad since the inception of the industrialization process in early 1960s. The GIS will also be used to delineate the socio-spatial segregation in a select industrial area of Ghaziabad.

Alongside contributing in the larger discussions on industrial urbanization in India, the paper aims to engage with the following methodological questions:

1. Why are interdisciplinary approaches and methods important in mapping urban change?
2. What are the methodological strategies to capture socio-spatial transformation of an industrial town?
3. How can a multi-scalar understanding of an urban space contribute in shaping an urban sustainability framework from a social justice perspective?

02

Assessment of the Impact of the Industrial Area on the Quality of Life in the Nearby Residential Area: A Case of Kanjikode**Keywords:** Industrial area; Quality of Life; Residential areaSisira P¹, Anil Kumar P P¹, Bimal P¹*(1) National Institute of Technology Calicut, India*

Although industries are basically a source of economic activity for the country, they are perceived as a source of pollution, which lowers living standards. A surge in the population is pouring into these industrial areas, exacerbating the situation. Industrial development areas were proposed throughout the country during the 1970's, but in Kanjikode the industrial development started in the 1980's. Kanjikode is an industrial town located east of Palakkad. It is a rapidly rising Palakkad suburb and one of Kerala's most important industrial zones. In the district, there are four industrial development areas with a total of 702.93 acres of land. In fact, the Kanjikode-Pudussery-Walayar industrial belt in Palakkad claims to be the most developed industrial area after Kochi. The Kerala state pollution control board (KSPCB) has inspected 15 steel rerolling mills in the Kanjikode industrial area on the allegation of serious air pollution from these factories. The local community alleged that water is polluted due to indiscriminate discharge of industrial waste and untreated water by units in the Kanjikode industrial belt. Hence, industrial pollution is a menace to the nearby residents because it creates a hazardous environment. The study aims to find the impact of polluting industries on the quality of life of surrounding residential areas with identified indicators and recommend spatial strategies and solutions to improve the quality of life. With first objective to explore the concept of quality of life & its indicators, dimensions, measurement techniques and determine the most relevant measurement to be used for the study. Secondly to examine the city from the aspect of industrial growth and to evaluate the settlements quantitatively in terms of QOL indicators. Thirdly, to compare the results of quantitative analysis with people's perception on QOL and recommend solutions/strategies taken to enhance QOL by minimizing the adverse effect. A literature study on various concepts of quality of life and its indicators, dimensions, measurement techniques, etc. were referred to. The city was examined from the aspect of industrial growth, and an evaluation of the settlements was done qualitatively and quantitatively in terms of identified QOL indicators. For which a total of nine indicators were identified for quantitative analysis and for qualitative analysis, the WHO QOL (World Health Organization-Quality of Life) questionnaire and questions on satisfaction with the neighbourhood environment were used for 11 local self-government (LSGs) in Palakkad district. The survey was conducted through random stratified sampling of representative samples. Critical parameters are identified by forming regression equations between the WHOQOL score and the score on the Likart scale on satisfaction with the neighbourhood environment. The parameters are studied and analysed for their spatial correlation and results are drawn. Finally, the maps of each indicators were overlaid by giving weightage by analytic hierarchy process and the most affected area due to the presence of industry was identified for which relevant interventions were made. Industrialization has the potential to help achieve a variety of social objectives, such as employment, poverty eradication, gender equality, labour standards, and greater access to education and healthcare. At the same time, industrial processes can have negative environmental impacts, causing climate change, loss of natural resources, air and water pollution, and the extinction of species. These threaten the global environment as well as the environment of nearby settlements. The study focuses on giving broad strategies and policy guidelines on industrial city planning, including measures to improve quality of life.

03

Shifting Gears: Business Plan as New Planning Approach for Peri-Urban Landscape**Keywords:** Industrial area; Quality of Life; Residential areaYajan Chaudhary ¹*(1) Department of Town & Country Planning, Government of Haryana, India*

The Peri-urban areas have constructive and pragmatic role to play in city-region growth. Peri-urban areas are going to be locomotives for economic development, key driver for investment and vital source of employment generation. Urban expansion in broader terms is the physical manifestation of socio-economic changes such as increased welfare, new employment opportunities, decline of traditional rural economy, transition in lifestyle and consumption pattern in peri-urban areas. However, if this peri-urbanization would be left unplanned or planned according to archaic models, it will create worst kind of urban sprawl. Therefore, the question which arises for spatial planners and policy makers is about the choice of planning approach for planned incremental development of peri-urban areas. The study strongly recommends Business Plan as new planning approach for development of peri-urban areas.

The Business Plan approach comprehension is of research interest for urban planners because most of the peri-urban areas and earmarked sub-cities, especially in India, have not taken off as envisaged in the development plans, as such plans failed to address market forces while lacking the vision aligned with global and national economic trends. Leaving no ambiguity, 'Business Plan' refers to spatial development plan with focus on vitalizing economy, attracting public and private investment and generating employment opportunities. The plan able to market opportunities and to enhance the pace of Development in peri-urban areas keeping the market forces in view and giving due consideration to existing inventory of resources and spatial dynamics of the region. The vision, land-use and activities which can be recommended for such integrated business spatial development plan is of exploratory interest.

The Narela Sub-City, Delhi is selected as the case study for the research on the basis of defined parameters. The Narela Sub-city project was incepted by Delhi Development Authority in 2010, which became a part of approved Zonal development plan of Zone P-I as per Master Plan of Delhi-2021. As per the Zonal development plan, the project happens to an amalgamation of various proposed landuses, including relocation of slum and JJ clusters from other parts of Delhi and host site for different activities shifted from the walled cities for wholesale activities prominently. However, unfortunately, over the period of time Narela Sub-City project has not developed with the pace as envisaged in the ZDP with only limited residential development coming forthwith. The study area has enormous potential of green field development subject to availability of substantial vacant land with the authority.

The Planning approach requires critical understanding of existing spatial pattern, density of built development and mix of land uses on the urban fringe. Also, the intangible factors such as global and national trends, cultural values, perceptions and attitudes, lifestyles and vision are as important to comprehend as tangible ones to develop a new planning paradigm. The new development opportunities are needed to be captured to catalyse growth in the region.

Also, if the business plan is aligned with the global and national vision, it can also catalyse the knowledge economy in the city-region while increasing the capacity of retaining talent and skilled workforce in the city-region itself. The study will also explore the inventory of the skills of the workforce present in the study area and potential to attract the influx of knowledge workers as a result of the proposed activities in the planning area while developing and integrated spatial business plan. With reference to 2018 World Urbanization prospects, 2.5 billion people will be added to the urban population by 2050, the percentage of urban population will rise from 55% to 68%. This leap of 13% increase will be looking forward to the peri-urban areas only to accommodate the added population. Therefore, the approach for planning for the peri-urban areas has a very significant role to play in stabilizing sustainability at a global level.

The study will explore the following aspects:

1. Sustainability of existing social and physical infrastructure
2. Activities needed to boost the project to realize its place of global iconic landmark.
3. Landuse change paradigm and management according to the business plan

The research will act as the lighthouse for other peri-urban areas and sub-cities to realize the goal of self-sustainable, self-sufficient and self-reliant society.

04

Rural - Urban Transformation in Central Java, Indonesia: Trend of Density, Land Demand, and Land Supply**Keywords:** Rural-Urban Transformation; Density; Land Demand; Land Supply; Central JavaIwan Rudiarto ¹*(1) Diponegoro University, Indonesia*

The relation between rural and urban has been contributing to rural-urban transition and transformation in most developing countries including Indonesia. Further, this discourse has led to bring together rural and urban, agriculture and industry, and ultimately economic growth and equity in harmony as an integrated package of development. The intention to integrate those companions in the development policy is to achieve a balanced development between rural and urban region. Balanced development among regions like rural and urban areas is a critical issue that needs to be addressed. Current development policies are likely to treat rural and urban areas in an entirely different manner which disregard the fact that outcomes of a policy would become a single set of the dynamic process affecting rural and urban areas as an interdependent system. Therefore, rural-urban transformation should be taken into account as two important terminologies in relation to the discussion of rural-urban regions. This discourse is at importance as research on the rural-urban area was mainly carried out on particular aspects such as people movement and natural resource flow and therefore need to call to a more comprehensive approach which includes spatial features of rural-urban interfaces with the intention to examine the rural-urban typology of rural-urban regions. Rural changes to urban in nature as physical characteristics and lifestyle. In economic term, development could also be understood as agricultural movement to industrial activities. In other words, development implies a process to achieve improved situation. The identification and analysis of rural-urban transformation subsequently contributes to regional development policy in a region. This research is purposed to elaborate physical rural-urban transformation through the trend of density, land demand, and land supply within a spatio-temporal assessment in Central Java Province, Indonesia. To achieve that purpose, physical analysis through Geographical Information System is carried out using satellite image and population data of year 2000, 2010, and 2019 from both primary and secondary sources.

In this research, land use-cover analysis is employed to analyses land use change dynamics and development. Density analysis is used in order to find the spatial pattern of physical development trend by looking at both built-up area and population growth. To predict land demand occurs in the study area, we use population projection based on two scenarios, i.e.; status quo and low projection scenarios. Status quo scenario concerns on growth rate (r) based on 2000 and 2019 population data with geometric formula while low projection scenario assumes that Central Java population growth rate has been declining in the lowest rate compared to other provinces. The result show that the development and rural-urban transformation in Central Java still heavily concentrated in Yogyakarta-Solo-Semarang corridor as well as in the north coast. It confirms that more developed region or corridor tend to increase the surrounding region to be more developed which may result to an imbalance development among the regions. This research is a great challenge for planners in developing spatial development policy for cities and villages developed as many cities in Java Island are distributed in this area.

05

Transdisciplinarity through the Research-Action Project on Urban Agriculture (Casablanca – Morocco)

Keywords: Transdisciplinarity; Urban agriculture; sustainable city; Research-Action; Casablanca

Fouad Amraoui ¹, Undine Giseke ², Kathrin Wieck ²

(1) Faculty of sciences Casablanca, Morocco

(2) TU Berlin, Germany

Transdisciplinarity makes it possible to deal with complex problems characterized by a high degree of thematic interconnection as well as the scientific questions they generate. It consists of federating disciplinary knowledge with reference to the problem dealt with, integrating knowledge from the field, but also setting up a common language, capable of supplanting the limits of each of the specialized disciplines and finally producing common specific knowledge. The Moroccan-German scientific cooperation project “Urban Agriculture, an integrative factor of climate-optimized urban development for Casablanca (AUC)”, implemented between 2005 and 2014, brought together several actors (academics, associative activists and administrative executives), who developed common visions and strategies for the future megalopolis of Casablanca by testing several methods and tools, such as research processes.

Urban agriculture being an emerging form of agricultural practices in the city. These are particularly productive and recreational open green spaces, which can be preserved in cities or peri-urban areas, in order to contribute in the long term to improving their attractiveness and quality of life. Indeed, this form of agriculture can play an important role in the urban-rural balance and can contribute enormously, in the current context of climate change, to the construction of sustainable cities in terms of mitigation, capacity building for adaptation and deployment of several social, economic, ecological and urban functions.

The book “Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca”, from the publishing house: Routledge, constitutes the crowning achievement of this project on the academic level but also a practical reference to help design a new strategy of urban development in Casablanca. The book takes Casablanca, one of the most dynamic cities in North Africa (5 million inhabitants, 500 hectares of new urbanization per year), as an example to test and lead this approach. The creation of synergies between the urban and rural environment in this emerging megacity is demonstrated through pilot projects, design solutions and multifunctional urban planning modules. These synergies ensure greater resource efficiency, particularly with regard to the use and reuse of water, and they strengthen regional food security and the social integration of multiple spheres. The book constitutes a lasting and essential legacy for researchers, planners, practitioners and policy makers working on urban development and urban agricultural strategies.

The challenge launched by the UAC project was to transcend the boundaries between different spheres, disciplines and cultures. In the current development process of a future megacity in an emerging country, questions arise whether productive and recreational open spaces can be developed in city-regions in order to contribute to the long-term attractiveness of cities and to a certain quality of life.

The answer to these questions concerns a number of relevant actors in various fields and disciplines,

and this is why the UAC project has chosen for its approach interdisciplinary and transdisciplinary perspectives in an intercultural context. Overall, the project set out to discover, initiate, promote and establish networking cooperations and sought to forge new alliances at different levels. The research project was not limited to the academic aspect and reflection, but also declined in the field in the form of concrete actions via four pilot projects which explored the existing synergies between agriculture and the particular activities of the city and its peri-urban space. The project team was multidisciplinary and intercultural, it consisted of 11 Moroccan and 7 German partners who are variously academic, institutional, civil society actors, industrialists and the main thematic administrations.

The challenge inherent in the project consisted, in various respects, in transcending borders and barriers: first those that linked the separate rural and urban spheres, and which invited, while providing the themes, a cross-cutting reflection that touches on urban and agricultural planning, the resource cycle and human development, etc. To be able to move forward together in the project, it was absolutely necessary to go beyond the boundaries between disciplines and between sectoral approaches, which constitute observable difficulties. Indeed, the project partners, influenced by their research context and their discipline, were accustomed to their own methods and pace of work.

Within the framework of an interdisciplinary research, the actors of the project had to learn to open up to different research methods and rally to a more systematic interdisciplinary approach. More and more, the specialization of disciplines is seen as an obstacle to knowledge. At the same time, the importance of specialization remains paramount since it is essential for the development of knowledge.

Interdisciplinary research that focuses on problem solving is often accused of not being a rigorous scientific approach. Moreover, researchers risk being poorly recognized, given that in their own disciplines there is no adequate evaluation with peer-judgment standards. Added to this is the need for personal investment, generally underestimated or little taken into account, to become familiar with another discipline. To venture beyond the limits of one's own discipline generally requires a strong personal commitment, given the complexity of the task in the face of the nature of the research, which is said to be uncertain. In this respect, the inter and transdisciplinary approach, involving academics, civil society activists and administrative staff from different sectors that made up the Moroccan team of the UAC project was a challenge in itself. Indeed, these actors do not often have the opportunity to work together, they do not use the same methods and the same work approaches and often have divergent perceptions and objectives or even contradictory interests which translate into practice by a conflict in the use of space. The relative success of this coordination process within the Moroccan team required a long apprenticeship, many frank discussions, reconciliation of opinions and even arbitration in order to iron out differences.

In terms of communication between the binational partners, the language problem was overcome by allowing intensive dialogues between the partners. Therefore, all meetings were held in English and French, simultaneously. Bilateral contacts became really effective when German partners were able to communicate in French with the help of students and teachers. In addition, the binational composition of the research team required the ability to overcome cultural barriers. This concerns the process of transfer between Arab culture and European culture, both in the ways of producing knowledge and working methods, but also in terms of fundamental understanding of the content associated with the city, urbanization, and to agriculture, etc.

The joint treatment of issues related to water, food production and urban development served to promote intercultural dialogue within the research process. On the other hand, it was necessary to identify other interfaces in the work process and to provide them with appropriate methods and tools to unite the administration and local actors in a sustainable exchange. Among the methods and tools that have been retained for the joint research process, we can cite the special events that accompanied the binational meetings and that allowed a lot of dialogue, allowing the production of results by mutual agreement. These included:

- Thematic workshops: Future Workshops, Creation Workshop, Evaluation Workshop and Transferability Workshop;
- Communication events: Casa Vision Verte 1 and 2;
- Competition and thematic training: International architecture and engineering competition, and training on multifunctionality;
- The International Symposium on Urban Agriculture.
- Added to this are the methods and tools developed at the level of the pilot projects: the working group on the problem of water, the working circles made up of local actors, the organization of farmers into associations as a framework for their support by project partners, communication circles (fair trade for local products), training sessions, agricultural fairs and others. However, some of the problems persisted during this phase of binational cooperation, including:
 - Difficulty sometimes in forming tandems of binational partners, either because of the language barrier, or because of a mismatch of profiles or areas of interest.
 - Irregularity in the involvement and commitment of institutional actors in the research process and the implementation of the results of the studies that have been carried out.
 - The difficulty of obtaining up-to-date basic data from the administration necessary for the studies carried out within the framework of the project.
 - The obligation to define pilot projects at the end of the preliminary phase generated a time constraint. More time should have been devoted to deepening a common understanding of the issues.
 - The difficulty of getting local actors in the peri-urban area to adhere to the objectives and actions of the pilot projects, when these local actors were used to receiving concrete help from stakeholders (administration, local authorities and NGOs, etc.).
 - In addition, the disparity of research grants was also a problem (only German partners received full funding), and therefore the appreciation of the problems of some Moroccan partners and their level of involvement did not reach the same intensity as that of the German partners

When evaluating the results on the different aspects, it must be said that the project, in addition to the requirements linked to the integrated process concerning the questions of content, has laid the foundations for a new variety of cooperation approach in the local context, national and international.



SMUS 23_21-02

Methods for Analyzing the Economy 2: The Informal Economy

Session Organisers:

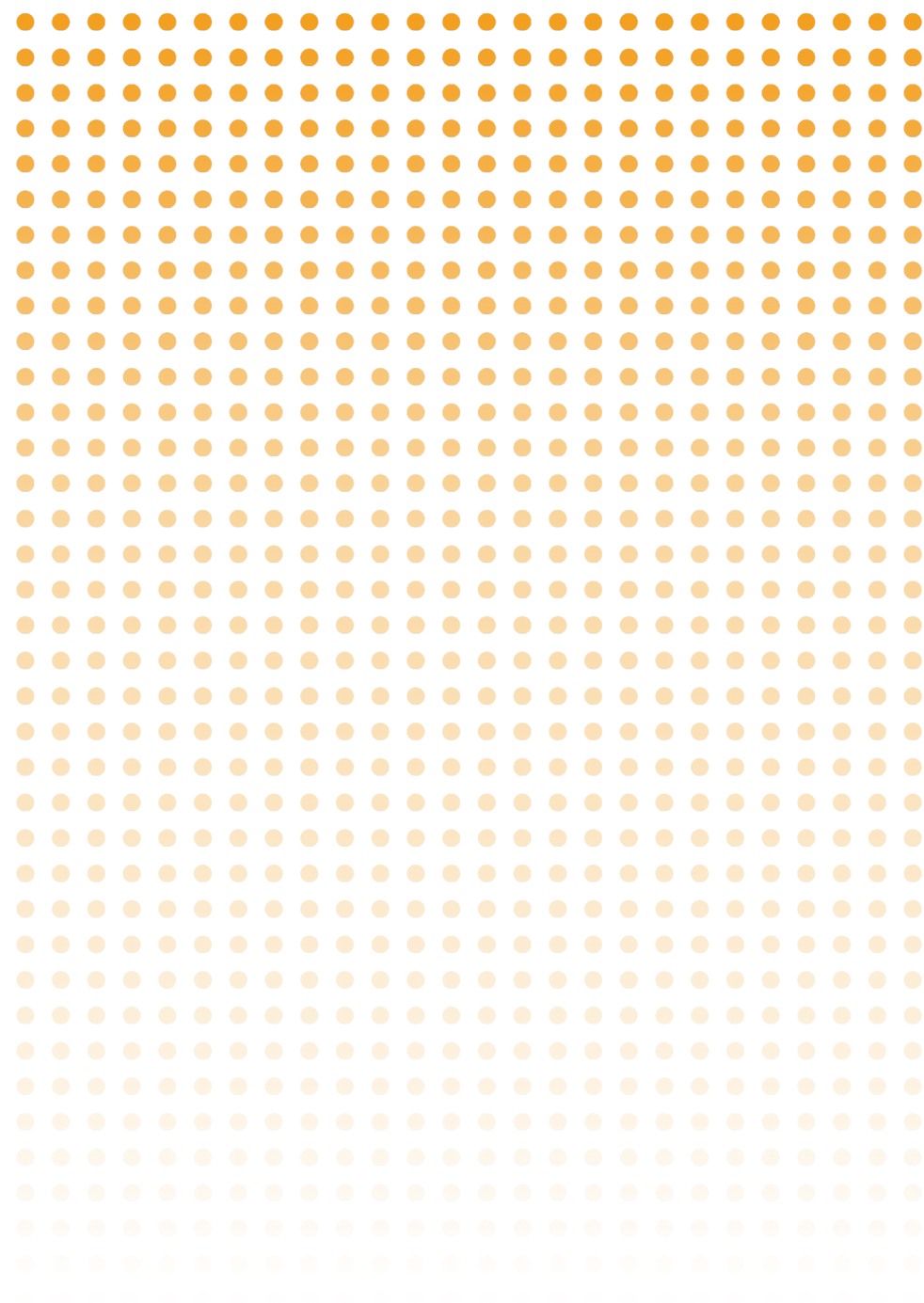
Edlyne Anugwom

Professor, University of Nigeria

Steve Tonah

Professor, University of Ghana





01

Okoetile: Farmer/herder Crisis and Urban Fringe Farming in Ibadan, Nigeria

Keywords: Urban fringe farming; urban agriculture; livelihood; farmer-herder crisis; Okoetile

Temitope Yetunde Bello ¹

(1) KolaDaisi University, Ibadan, Nigeria

In recent times of growing urbanization and climate change, African countries are challenged by the urgency to address inter-ethnic and resource-based conflicts, urban congestion, poverty, food crisis and other development-threatening issues. Encouraging urban agriculture is, therefore, gaining momentum. While existing scholarly and policy attention is directed at enhancing urban agriculture by focusing on how the practice addresses food insecurity, unemployment and urban poverty, the rationale and dynamics of rapidly growing farming in urban fringes of Ibadan, Nigeria are still poorly identified and understood. The phenomenon of urban fringe farming among displaced farmers has become an object to be studied, particularly on how violent conflicts involving farmers and herders in the northern regions of Nigeria increase the number of people fleeing their rural communities to engage in farming practices in the fringes of Ibadan metropolis. Due to increased bloody conflicts over access to agricultural land between farmers and Fulani herders, who were displaced from the Sahel region and Northern Nigeria by climate change, there have been southward movements of peasants. Mass migration of farmers towards the southwestern region of the country is, thereby, causing a sudden upsurge and indicating a new dimension to pre-existing neighbourhood farming practices among Yoruba people of South West, Nigeria – okoetile.

It is crucial to interrogate the sudden or rapid expansion of this agricultural practice among displaced farmers by critically examining the embedded socio-economic livelihood characteristics, challenges as well as implications to urbanization processes. The study employs the Livelihood Resilience theoretical approach that centres on the complexities of people's livelihoods and related socioeconomic survival and coping mechanisms.

This paper describes how displaced farmers adapt or respond to shocks and stress that are connected to violent land-related and inter-ethnic conflicts, food insecurity, inadequate or lack of social protections and unfavourable climate change.

Ethnographic and historical research designs provide methodological space that includes cultural beliefs, attitudes, values, traditions and experiences of displaced farmers in rigorous studies. These designs, representing radical approaches to African research on Africa, are elements of the cultural sensitive approaches that offer empirical research using the indigenous lens to scrutinize the choice of methodologies to be employed in the search for the truth about displaced people's livelihood experiences in urban and peri-urban areas. Rather than confining this African contextual discourse within stereotypic and universal positivist or experimental methods, this research demonstrates the essence of descriptive knowledge through subjective experiences and an in-depth understanding of complexities and peculiarities. Adopting culturally sensitive designs identifies the essence of attaching truths and credibility of the research to the cultural perspectives of participants – the displaced farmers. On the one hand, the ethnography adopted in the paper provides thematic, phenomenal and cultural investigations of underlying issues of livelihood resilience of farmers in situations of conflicts and subsequent crises. Data from observation of real-life experiences

and in-depth interviews of farmers provide an empirical basis to affirm the essence of examining another dimension of urban agriculture. On the other hand, the historical research design used in the study creates a dynamic explanation that searches and identifies the relationship between past farmer-herder conflicts in Nigeria and their present effects on the present agricultural practices in areas surrounding the city of Ibadan. It also aids in understanding how the features of present farming practices in urban fringes deviate from or connect with the okoetile of the traditional Yoruba system. In addition to the primary source of data, secondary information is also obtained from books, journals and newspapers.

The issue of validity and reliability in qualitative research, particularly at the point of data collection, has remained contentious especially when identified from the quantitative inquiry demands and expectations. Rather than subjecting all information to measurable procedures to ascertain levels of accuracy and extent of generalization with similar circumstances, valid and reliable research outcome is a function of data credibility brought about by multiple methods of information sourcing. The extent of research reliability in qualitative research has been identified as problematic, owing to the constant presence and effects of researchers' bias. In the course of taking field accounts from the context within which the phenomenon originated, ethnography and historical research rely on socially constructed meanings and representations which are inseparable from researchers' bias. Therefore, to ensure validity and reliability in this kind of qualitative research is to emphasize credibility and truth finding which can limit the influence of researchers' bias to the barest minimum.

In this work, the issue of validity and reliability is addressed from the point of data collection, whereby, multi-method approaches have been employed by the researcher towards the generalizability of the research. By spending enough time on the field and, in the process, obtaining data from different sources to corroborate the findings, the researcher can minimize bias. Observations of farming activities (especially during cultivation periods) majorly carried out by displaced farmers in Sasa, Olodo and Apata areas of Ibadan, continuous in-depth interviews of displaced male and female farmers to the point of saturation (when many informants give the same or very similar account) and gathering of information from secondary sources form a combination reliable data. This is because accounts given by farmers are not only affirmed and complemented by observable activities and information obtainable from newspapers, journals and other written documents, these accounts also verify theoretical assumptions and strengthen the empirical inquiry. The collected information is content analysed, using a thematic style.

A detailed first-hand description of experiences (presented in form of original voices) of displaced farmers in Ibadan city outskirts offers logic and proof of persistent shrinking of urban fringes, expansion of urbanization and entrenchment of pre-existing traditional Yoruba neighbourhood farming practice – okoetile in the studied Yoruba settlements. It is noteworthy to also include that these data provide evidence of connections between violent farmer-herder conflicts across the country and practices of urban fringe farming by establishing poor living condition of farmers despite their contributions to food supply in the city of Ibadan. The paper concludes by proposing government's institutional interventions in the activities of these farmers by improving social and economic facilities and securing farmlands from against different criminal and violent encroachments.

02

Doing Research in the Informal Sector and Among Mobile Populations: Experiences from Accra, Ghana

Keywords: Informal sector workers; mobile populations; Street traders and Hawkers; Porters; methodological challenges

Steve Tonah ¹

(1) University of Ghana, Legon-Accra, Ghana

One of the main characteristics of life in the Global South is the preponderance of the informal sector in the economic and social life of many residents. Indeed, in many countries the informal sector of the economy is characterized by the non-regulation and registration of economic activities, poor records-keeping and documentation, no fixed locations and addresses of businesses, non-payment of taxes, as well as free entry and exist into the sector, among others. The informal sector or economy is also a dominant sector of the economy (when compared to the formal sector) and often employs a large segment of the labour force and the population. Given this situation, researchers who work in the Global South often encounter different conditions and challenges (when compared to those doing fieldwork in the global north) with respect to fieldwork and information/data collection. As a result of this, such researchers have to use different approaches than those they are used to in the Global North. This paper examines the peculiar nature and associated challenges of doing fieldwork among workers in the informal sector and mobile populations of Accra, Ghana's capital city. The informal sector employs more than 70 percent of the adult working population of the city and continues to receive new migrant workers daily who are mainly self-employed or are engaged by small businesses. Some of the main work undertaken by persons in Accra's informal sector include hawking, trading, transporting goods, provision of services, repair of household goods and equipment, scavenging for disused electrical and electronic goods, collection and recycling of goods, among many others. Using the cases of street hawkers/traders and porters in Accra, the paper considers the approaches that can be used in doing fieldwork and collecting data among populations that are engaged in the informal sector of the economy and are highly mobile.

The general line of the argument of this paper is that doing fieldwork and collecting data/information in the Global South, especially when it involves dealing with persons working in the informal sector or economy, will involve having to adopt different strategies as compared to those doing research in the formal sector/economy. I intend to report on our experiences with doing research in the urban and peri-urban areas of Accra's informal sector and describe some of challenges we faced and how we were able to resolve these challenges. Some of the challenges that will be faced by researchers include the dearth of data and information on the subjects of the research, the lack of well-organized leadership among informal sector workers, absence of recording keeping on their activities and businesses, challenges of collecting data from a highly mobile population etc. Furthermore, doing research among mobile populations involve having to move with the respondents, understudy their mobility patterns, being prepared to do multi-sited research. Generally, it is more difficult to undertake quantitative studies due to the absence of reliable data. Qualitative methods are preferable. Collecting information from the entire members of a household or a group may also be difficult due to their changing mobility and residential patterns. Similarly, ethnographic and group discussions are virtually impossible. The researcher has to rely on individual interviews at multi-sited locations. Mobile individuals are also often in conflict with their sedentary neighbours as well as the city authorities or the state. They are often accused of non-payment of taxes, occupying and degrading public spaces, and making planning

difficult for city authorities. These are some of the methodological challenges that the researcher has to be prepared to deal with. This paper is relevant because it will address important and typical challenges that researchers face in doing fieldwork in the informal sector of cities and towns in Africa and across the Global South.

03

Development of Socio-economic Spaces of Urban Villages in India: A Case of Sohana Urban Village, Mohali

Keywords: Socio Cultural; Urban Village; Sohana; Mixed Land Use

Vimal Preetm¹, Saloni Mehta¹

(1) Chandigarh University, India

Indian Market streets 'Bazaar' has always been a historical hub for social lives of people and they act in variety of social, cultural as well as economic roles. The urban public domain is made up of the street, where people socialize, celebrate, spend their leisure time along with the performing the daily economic activities. Streets play an important role in many of the cultural functions, such as religious festivals and cultural gatherings. Even these activities imply a street celebration, giving the city a thread of personality and culture. As in the case of Indian streets, predominantly, they have an organic spread all over the area. Typically, the land use of such areas is mixed land use where the residential is placed over the commercial. Punjab has witnessed a thriving market that is rich in culture and history as part of the silk route. One of the largest commercial centers from Delhi to Pakistan at the time, with several market typologies. Punjab's economic leadership throughout the historical period was in the hands of the traditional Indian commercial community. Punjab features a variety of marketplaces with colorful dupattas, shoes, ethnic clothing, jaggery, pickles, and sweets, among other things. Every village in Punjab had an inner core area consisting of the mixed land use having fine grained urban texture. One or more streets were typically dedicated to commercial areas which used to be the backbone of the village economy. Typically, settlement area or the Abadi area used to be bordered by the "Phirmi road" which acted as boundary of the village settlement. The similar characteristics are observed in the pre-development phase of the Sohana village. Sohana is the urban village of Mohali, which became part of the Mohali Municipal Corporation in 2012. The village in the pre developmental phase can be characterised by a dynamic bazaar or market street in the core area of the village and rest of the village being predominantly residential. Being one of the oldest and largest villages of Mohali, it has been subjected to rapid urbanization as an effect of Chandigarh's progressive growth. After the inception of Mohali city and Sohana being merged with the city grid, the Village has experienced two kinds of developmental forces, one the development happening in the outer boundaries as response to the newly developing city and two the inner core area forced to respond to the lack of the serviced based industry of the Mohali City. As a result of these forces of change, it is observed that the Urban village has developed the higher order of the commercial pockets in the periphery of the village while the core area remains mainly low level of commercial shops serving only the residents of the Village. It has an interdependency of social spaces and commercial areas which creates chaos by obscuring the personality and culture of the street. It has a broad spectra of shop typologies like electronics, food, vending, clothing, furniture, hardware, kirana, flour mills, etc. Focusing on the social construct of the Bazaar of the area, there has been segregation of private and public spaces in the village. This became a major reason for the placement of major market streets on the periphery of the Phirmi road of Sohana. Pertaining to the historical essence and vibrancy of its market streets. Due to tight alleys in the village, leading to the area having local stores like Kirana and tailor shops at the center, the market is expanding outside.

Bazar and chowks of Indian setup have always been a reflection of the cultural face of the area. The very same case is with Sohana, where the streets lie at the heart of the public life of the villagers.

Gurudwara Singh Shaheedan, Sohana is one of the well-known religious places of Punjab. The presence of such a prevailing structure has affected the Mohalla's or the districts within the village, with the public influx and engaging activities happening in the same. Due to the above-mentioned reason, it can be seen that several with heterogeneity in its typology is present. Contributing to the facilities provided to gurudwara as well as the village. This paper will demonstrate how the residents respond street's physical and social characteristics and the evolution of commercial streets. The analysis of street patterns is framed due to the growth of the commercial area. In a comparative study between urban reality vs. daily reality, the physical aspect of the street identifies and influences the real usage of the roadway. The nodes in the village streets had wells which were the hub the social life of the residents. The village squares which developed due to the requirement of the basic infrastructure also contributed to the social and cultural integrity of the place. The survey conducted to understand the overall growth, rent, degree of commercial activity and its typology, it was observed that higher order of the commercial in the core of the village has moved to the periphery of the village, while the inner core of the village is dotted with service based shops, such as small bakery, tailors, barbers, general stores etc. The basic premise of this correlational research is to explore and evaluate the urban street in Sohana's commercial sections as a living corridor that reflects an urban village, and the interdependencies of commercial areas. The study also investigates how a street's physical characteristics might hinder or encourage social life on any street by supporting or suppressing a socially active atmosphere. Mapping the commercial areas of the village and understanding the Urban Interphase of the Village the paper focuses mainly on the changing character of the commercial areas of the village. Many of the services which are indigenous to the Indian way of life is found absent in the planned development of the Mohali City. These urban villages respond to the gap that is observed in the planning of the commercial spaces. These Urban villages have become the service providers to the indigenous way of life and requirements of the Indian market system. Although the Urban village may appear to be a chaotic area in the heart of the city but this is an essential part of the India City and acts as important service provider.

04

Social Realm of Indian Streets: Understanding ‘Informality’ for Designing Streets as Social Public Spaces which Respond to the Local Context; Case: Bengaluru, India

Keywords: Context-Responsive; Informality; Culturalist Approach; Decolonisation

Ahalya Vedaparayana Gandikota ¹

(1) Bauhaus University, Weimar, Germany

The life and liveliness of any city can be clearly perceived from the nature of their streets, be it the crowded, smoky, bustling streets like ‘The Commercial Street’ in Bangalore or a temple street in Tirupati or the grand Haussmann’s Boulevards in Paris. However, unlike the west, the streets in India serve a far more diverse purpose than what they are intended to. On most streets in urban India, people may be seen walking, but they are also seen doing a multitude of activities from working, cooking, talking, eating, sleeping, and reading to simply hanging out (Anjaria, 2012, p.23). However, these diverse activities on streets have always been a blatant refusal of the Indian to become citizens of an ideal bourgeois order. Also, the increased preference given to motorised transport today has been leading to the slow disappearance of various such activities which bring life to a street. Indian streets present a visually confused but functioning urban environment. Such streets are best understood through a ‘culturalist’ approach in terms of their unique rhythm and logic of practice. The research behind this paper has been done with the hypothesis that there is a need to perceive Indian streets as more than just thoroughfares and as places of social interaction.

Most Indian cities today do not have street design guidelines to direct urban street planning. The existing street design guidelines in most Indian cities are primarily for national and state highways, with minimal emphasis on urban roads and streets and no regard for pedestrian activity or space for tyre repair shops or chai stands. Though the street design has begun to be addressed by cities like Bangalore, Ahmedabad, Delhi, the guidelines emphasize streets as public spaces by mimicking ‘global’ engineering standards at the expense of the vernacular design features of streets that make them conducive to public life. Though there has been considerable research on successful public open spaces in developed countries, not much has been done in this regard in the Indian context, where there is a considerable difference between usage of public spaces and their quality from those in developed countries. In most traditional streets, it can be observed that the local businesses maintain harmony and work in partnerships with street vendors. The vendors take care of the shops while the shop owners are on breaks and in return, get to use the space in front of the shops without hampering the entry and display of the shops. This symbiotic relationship is something that needs to be maintained and augmented. The informal business groups and activities offer a subculture to the street which co-mingles seamlessly with the core of the city environment and are also great alternate service providers. Their share to the country’s economic development has been continuously growing as they contribute nearly 30-40 percent to the national economy (Mitra.P, 2006). They are also recognized as per the National Policy on Urban Vendors Act. Unfortunately, it is a fact that the street vendors are still considered as public encroachments and are viewed as a social evil.

One of the most devastating effects that Colonialism has had on India is what K.C. Bhattacharya, an eminent Indian philosopher, describes it as ‘enslavement of minds’. It resulted in erasing of memories, a sense of inferiority, an alien conceptual vocabulary, and a hegemonic perspective in viewing the world (Bhattacharya, 1954). The consequence could be attributed to why urban

development in India still looks up to the west as the benchmark of progress and attempts to imitate it. It is symptomatic of our attitude even today as ‘Amaravati’, the new capital city of Andhra Pradesh in India gets designed by Singapore based designers with an image of Singapore. Hence, there is a need for context-responsive urban solutions and thinking in the dialects of Indian traditions and cultures, further contributing to the decolonization of our minds. The argument driving this paper is that an Indian street may not be an embodiment of perfection as it has its own drawbacks, but disregarding it as a sign of poverty without protecting and preserving the culture, may result in cities losing their identity and into a risk of aping the west.

To comprehend the ‘harmony in chaos’ of what an Indian street entails and characterises, there is a need to establish new terms, vocabulary or design aspects that are specific to the Indian context, which looks at the local people, their customs, needs and experiences and is not just influenced by the west. For example, just like in any other city, Kannadigas use a personalised local terminology in Bangalore. Oni refers to an alley, Daari to a path, Raste to a road, Heddogai or a wider road, and in different contexts. It is significant to note that these terms are all concerning to their private houses, which reflects the importance of the streets in their smallest scale and how they are integrated into the people’s lives. Hence a ‘culturalist’ approach in urban planning in India would ensure that planning processes are not ignorant of the existing ground conditions and the needs of the inhabitants. In this background, my paper focuses on evaluating spatial and social forces of both formal and informal/traditional streets in the city of Bangalore to come up with various tangible (physical) and intangible (social) aspects for the design of streets as social public spaces responding to the local context, culture, and lifestyle of the people, thereby making them sustainable. Bangalore, the capital and the largest city of Karnataka, since the 1990s, has seen a booming increase in the IT sector resulting in a significant shift in urban form due to the increased influence of private stakeholders in the planning process. This has not only led to the de-contextualization of urban design and planning but also to consultant agencies publishing planning guidelines.

The paper comprises of both quantitative and qualitative methods to analyse various case-studies. Three traditional streets are chosen from the colonial and Post-colonial areas of Bangalore to understand how the old, ‘informal’ streets work and two streets which are newly redeveloped as per the TenderSURE guidelines. The qualitative analysis includes spatial analysis through street sections, field visits, and interviews to understand the phenomenology and typical scenes of everyday lives of the people. As part of the quantitative analysis, the toolkit by Reid Ewing and Otto Clemente has been used as the starting point for analyzing the urban qualities of the chosen streets. These are combined during analysis to recommend various tangible and intangible aspects for the design of Indian streets and how the stimuli of these social lives can be comprehended to formulate design guidelines in Indian cities that are facing similar urban transformations as that of Bangalore.

The qualitative and quantitative analyses helps in critically appraising the five case-studies offering contrasting examples. By putting forth the public space scenario in the context of India, this paper attempts to enhance a critical global dialogue on context-responsive methods to approach public space design at micro and macro levels, hence adding value to this session while contributing to public space research and related literature.

05

Innovative Perspectives on Qualitative Research for dealing with IT Sector Complexities

Keywords: Qualitative Research Methodology; Ethnography; Ethnomethodology; IT Sector; Fieldwork

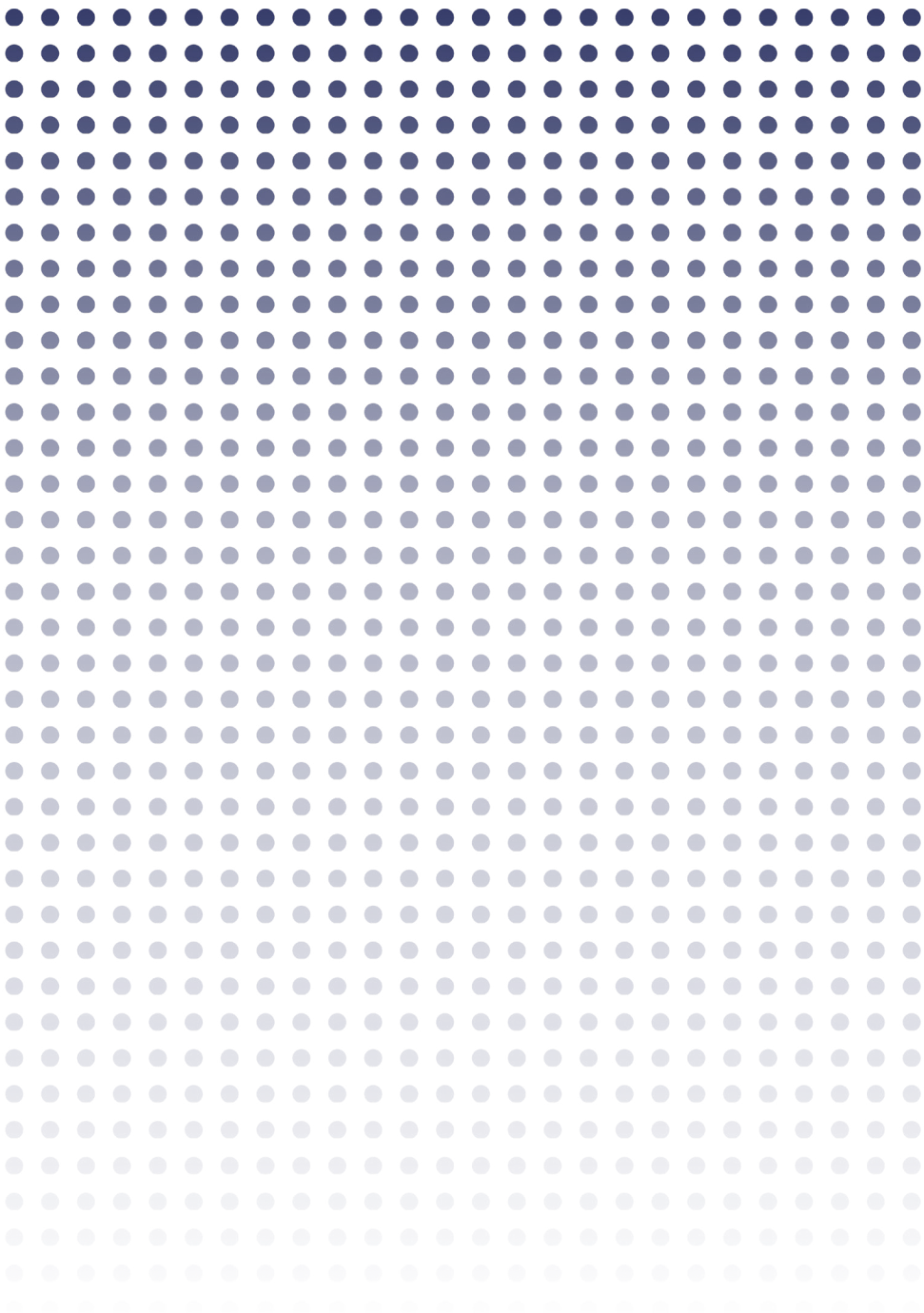
Ishani Vajpai ¹

(1) Indian Institute of Technology Jodhpur, India

Ethnography, as a qualitative research methodology, until recently, has been considered a product of colonial research outcomes. Usually, the idea is to use the Occidental lens for analysis providing justifiable representation and holistic understanding of contextualization for particular communities, ethnicities, cultures, and the like. Extensive research has been carried out around the globe by ‘indigenous researchers’ or the ‘others’ to decolonise the traditional research processes. In recent times, with the rise in the concept of globalisation along with inclusivity and diversity, there has been an exponential rise in intercultural and multicultural collaborations, especially in sectors like Information Technology (IT), which has its genesis in the Global West. Globalization and privatization have brought new work relationships, job insecurity, and workforce dynamics. IT sector is one of the biggest employers of white-collar professionals in India and worldwide. It’s an enormous reservoir of technically skilled workforce, due to which India is on the path of becoming a software superpower. The IT industry clients include techno-commercial services catering to a variety of sectors, education, health, transport and hospitality, and the like. It also provides critical infrastructure for various other sectors and communities in these severely challenging times, including healthcare. Hence, technological advances continue to blur national borders, ultimately moving towards bringing nations and cultures together. Extensive qualitative studies are required to provide a thick description to understand the social, cultural, political, economical, as well as financial transformations and ramifications.

Moreover, these studies may have an acute impact on the design and implementation of organizational policies, including those related to human resource management, employee wellbeing, employee engagement, organizational training and development, and other employment-related practices. Unfortunately, not much work has been done in decolonizing ethnographical research in such settings, which are an amalgamation of people from various socio-cultural backgrounds, ethnicities, genders, classes, castes, et cetera. I have been carrying out multi-sited patchwork ethnography in the IT organizations in India, since March 2020, across 40 organizations, including Multinational and Transnational Organizations, and start-ups, with their genesis in India and Global West. The interviews carried out include fifty five people from various backgrounds in IT like software development, sales and marketing, project management, Android/iOS development, technical consultancy, design, and other IT enabled services. These individuals are serving at various designations and job levels across different technologies and organizations. I followed a focused, semi-structured interview approach after extensive content and document analysis. I have also incorporated concepts of ethnomethodology in my work to understand the work settings and social order in the Information and Communication discipline-oriented technical area like the IT sector. During my fieldwork, I have found that the current way of qualitative research does not fulfill the aim of synthesising different epistemological and ontological views, especially in the dynamic, mobile, and volatile IT environment. In this paper, I try to give an ‘epistemological equity’ in the process of data collection, analysis, and presentation, in intercultural and multicultural, and diverse settings like the IT sector. In this conceptual framework, I propose

a methodology of understanding our position as researchers in the transformative paradigms of ever-changing circumstances and spatiotemporal factors, with one of the most significant examples being COVID-19. The pandemic has forced institutions to come up with reforms and organizational change in their work culture, internal and external environment, economy, and even in the concept of socialization. This paper tries to understand how to conceptualise and design research as well as accommodate necessary changes in the transitory situations at local, national, and global levels. Through this paper, I discuss the innovative approach, a combination of physical and virtual ethnography and ethnomethodology, that has been implemented in my research. The research started in pre-COVID-19 times and continued throughout the waves of COVID-19 and post-pandemic, which gave me an opportunity to devise new plans for going beyond the traditional way of qualitative research. Since this research could not be carried out using only the traditional qualitative methods, major changes had to be made in my methodology to deal with multiple contingencies and circumstances beyond control. Hence this research provides a fresh perspective on social science research, that could be carried out in complex environments like IT sector. This study attempts to bridge the existing literature gaps that do not entirely describe the new avenues and modalities that could be used for qualitative research in global industries like the IT sector. The outcome of this research is to provide a broader narrative in understanding the concept of decolonizing social science research, not only from the perspectives of 'indigenous' or 'others', but also from the idea of positioning research as an interface between subjective and objective understandings, in industries which have a colonial origin.





SMUS 23_22

Methods for Studying the Spatial Dimension of Infrastructures

Session Organisers:

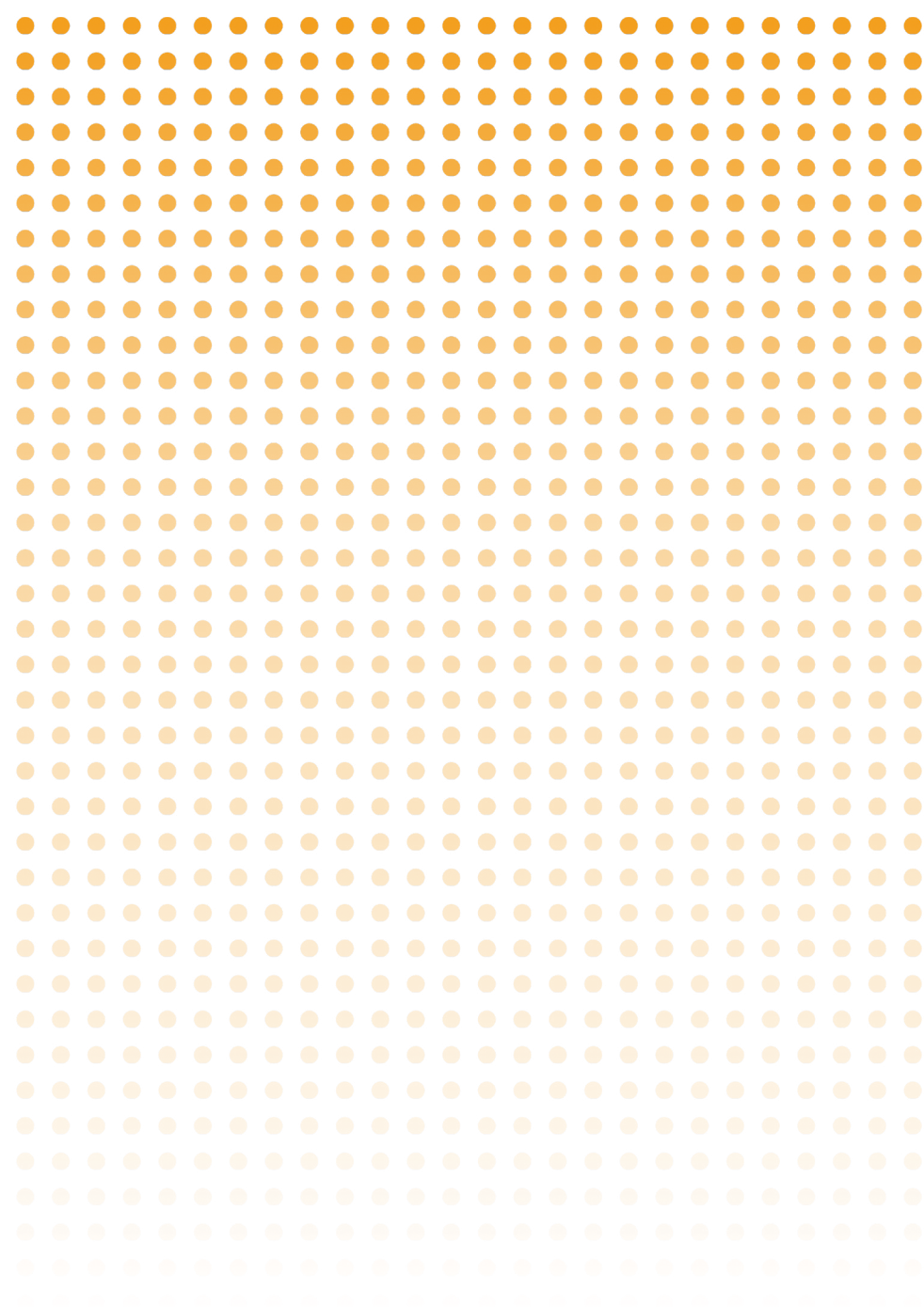
René Tuma

TU Berlin

Nadine Schabét

Friedrich-Alexander University of Erlangen-Nuremberg





01

Mapping Internet Infrastructures: Spatial Imaginations and Visual Representations

Keywords: Mapping; Critical Cartography; Digital Infrastructures; Spatial Imagination

Silke Steets ¹

(1) Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Mappings of the Internet have been around as long as the Internet itself. They not only express spatial knowledge about the digital infrastructures underlying the Internet, but also show the culturally different spatial imaginations of a networked social world. Internet maps are thus documents of spatial syntheses.

In my talk, I will present and compare Internet maps from different eras and parts of the world. Drawing on the insights of critical cartography and discussions about the representation of space, I will propose a scheme of analysis that includes the following four levels:

1. Contextual analysis (What data is the map based on? Who created the map? In what historical and cultural context was it created?),
2. Semiotic analysis (How are textual, graphic and pictorial elements combined? What elements of space are synchronized in the map?),
3. Spatial analysis (Is space represented topographically, topologically, or in some other way? What is placed in the center, what in the periphery? How does a map position its viewer?),
4. Symbolic-synthetic analysis (What is the basic thesis underlying the map? What spatial figures does it represent?).

The analysis I propose is intended to show how and for what purpose digital infrastructures are made visible and what imaginations of space they convey.

02

Making and Maintenance of Mumbai Lakes' Watersheds as Infrastructure

Keywords: Watershed Governance; Infrastructuring; Urbanisation

Shashank Deora ¹, Pankaj Sekhsaria ¹

(1) Indian Institute of Technology Bombay, India

India has witnessed rapid urbanisation for the last few decades. Urbanisation brings along possibilities to improve quality of life and access to resources. However, the realisation of these outcomes depends upon the local contexts – different groups and communities may experience the impacts of urbanisation differently, not necessarily as beneficial. For instance, it may create different kinds of land use pressures that may privilege the interests of certain groups and individuals over others.

The urban expansion in India has not been as per a plan but has been spontaneous and unplanned, also associated with the elements of informality. Its unplanned nature can potentially accentuate the inequalities associated with urbanisation. Scholars note that the outcomes of urbanisation generally adversely affect the poor and marginalised sections of the population, for instance, through the loss of their agricultural land or by pushing slum dwellers out of their homes. Urbanisation also adversely affects natural resource health in the long run.

The urbanisation of a landscape is usually associated with a change in the land use pattern, improved access to the market, a simultaneous rise in infrastructural coverage, and a rise in the pollution and degradation of natural resources, among others. Such processes of transition are not only seen at the spatial urban peripheries but can also be exhibited by a landscape in the midst of a city.

The transformations associated with urbanisation alter how the natural resources (land and water resources) are governed in the peri-urban spaces. They change the patterns of association of the existing actors with these resources. Simultaneously, urbanisation also brings in new actors in the governance system. The governance of the land and water resources – their access, management, and control – in peri-urban spaces happens through negotiations and contestations among these diverse rural and urban actors.

Many challenges to effective natural resource governance in urbanising spaces are rooted in the structural issues of inequities, unequal power relations, and the value conflicts associated with natural resources. Challenges to governance originating from these issues may continue to exist long after urbanisation. They influence how the actors in resource governance behave to promote their interests. To understand these issues and the challenges to the effective governance of the land and water resources in an urbanising space, we are studying the contiguous watershed landscape of Mumbai's three lakes – Powai, Vihar and Tulsi lakes – comprising of the lakes and their catchments. Mumbai has been a major urban centre since at least the nineteenth century, and it has been serving as a crucial seaport since the British colonial period. Its recognition as the 'urbs prima in Indis', meaning the first city of the Indian subcontinent – based on the 1872 census when it had the largest population in the subcontinent – alludes to the growing urbanisation in Mumbai since at least the second half of the nineteenth century. Urbanisation in Mumbai only intensified after India's independence in 1947. Mumbai thus presents the epitome of the growing urbanisation in India. The

experience of watershed governance in Mumbai – through its rural-to-urban transition – may hold crucial lessons for other regions in India and South Asia experiencing similar changes to governing their land and water resources sustainably and equitably.

In this research, we attempt to unravel the complexities in the governance of the watershed landscape around the Mumbai lakes. To explain these complexities, we build on the infrastructure studies in the Science and Technology Studies (STS) to propose an understanding of the watershed landscape as infrastructure. We study the historical emergence of the contiguous watershed landscape as an infrastructure facilitating diverse functions, benefits, and services for different watershed actors. We attempt to highlight how the infrastructuring of watersheds has shaped what benefits and services the watershed landscape provides and to which actors. The infrastructural lens around the watershed enables our research to analyse both the diverse technical and the other non-technical infrastructuring processes.

The contiguous watershed landscapes in our study comprise the earliest of Mumbai's water supply lakes – Vihar, Tulsi, and Powai lakes. Before the construction of the first of these three lakes in the mid-nineteenth century, the sites of the lakes and their catchments were remote villages and agricultural fields with some forest cover. However, currently, a significant part of the contiguous watersheds has evolved to become a wilderness. Nevertheless, the entire watershed landscape is now an integral part of the Mumbai metropolis, and a fraction of it in the Powai suburb has even evolved into a prime suburb.

In this research, we investigate the technical infrastructuring – construction of earthen dams making lakes, laying of pipe-lines from initially distant lakes to Mumbai, modifying the hydrology by joining two distinct watersheds to facilitate drinking water supply to Mumbai – and the policy-related infrastructuring – primarily to conserve the catchments of lakes evicting local residents that led to the eventual emergence of a national park – around the watershed landscape since the mid-nineteenth century. We look at the impacts of these infrastructuring processes on the watershed landscape and the key watershed actors, keeping power and politics at the centre of our research. We also look at some of the ongoing governance challenges around this watershed landscape through classic ethnographic methods – non-participant observations and interviews of watershed actors – and other spatial analysis, mapping of land use and land cover using satellite imageries and through the consecutive development plan maps of Mumbai, mapping of land ownership rights across the watershed landscape among others.

We highlight significant conflicts, contestations, and negotiations among the watershed actors through which these actors try to pursue their interests around the watershed landscape. The nature and the distribution of the watershed's functions, benefits, and services are shaped by these continuous conflicts, contestations, and negotiations which are also part of the infrastructuring processes around the watershed landscape. Our work till now suggests that the infrastructuring around the watershed landscape since the mid-nineteenth century has privileged the politically powerful interests at the expense of marginalised interests. However, as this is a work in progress and both our fieldwork and analysis are ongoing, we might refine our conclusion at a later stage.

03

Public Open Spaces as Urban Cultural Infrastructure: Theoretical roles and Methodological Framework

Keywords: Public Open Spaces; Cultural Infrastructure; Cultural Ecosystem Services; Infrastructural Turning; Anesthetization of Everyday Life

Yuxian Chen ¹, Daixin Dai ²

(1) *Tongji University, China ; Technical University of Munich, Germany*

(2) *Tongji University, China*

All human settlements consist of physical entities and the spaces between them. The physical entities define the private spaces in the community, while the in-between spaces become the public open spaces (POS) connecting different entities and people. Therefore, the infrastructure and cultural attributes of POS are innate—on the one hand, POS serve as an infrastructure for the flow of “man” and “material” and constitute the basic functions for the community; On the one hand, POS enable cultural practices such as information exchange, public activities, and contribute to a lively society. The harmony of the dual attributes of POS was broken in the urban renovation boom led by road renovation in the late industrialization period. For example, the urban transformation of Paris (1853) and Vienna (1850), through the intervention of powerful political forces, ripped apart the naturally formed cities of the Middle Ages to accommodate the surge in public demand for transportation and military needs. Public open spaces that accommodate popular cultural life are dying. Asian cities unfortunately followed the procedure later inevitably. Nowadays in cyber era and post-COVID era, the alienization of individuals and their everyday life is even worse. Two questions are therefore proposed: (1) What roles should POS play in current urban spatial system according to their dual attributes? (2) How to establish a methodological framework for cultural practice accommodation in POS research and planning practice?

The perspective of cultural infrastructure offers a potential solution to both questions:

On the one hand, it provides reference to a deeper understanding of POS’ infrastructural attribute and their roles in the context of urban spatial system. The hierarchies and boundaries between high culture and popular culture are dissolving, and the forms of man-land interaction are changing under the trend of “aestheticization of everyday life”. Cultural activities have gone beyond the scope of traditional elite aesthetics such as pure art/literature in museums and galleries and have expanded to urban residents’ everyday life. POS at different scales, such as pedestrian streets, city squares and community gardens, have thus become a new set of infrastructure that supports the transformation of cultural activities from indoor unilateral display in museums and galleries to multilateral cultural experience, production, and identification outdoors. The function of POS is correspondingly expanded from offering specific physical facilities and functions to providing cultural services. Cultural ecosystem service (CES) evaluation in POS has thus become a hot topic to measure the performance of POS at different scales.

Cultural infrastructure planning, which has been employed as a key tool to urban regeneration in western cities such as London, Sydney, and Toronto, provides a theoretical framework for identifying POS roles at different scales and the configuration deficiencies of POS regeneration planning. The roles of POS at different scales should be: 1) At macro scale, POS are the component of city image and the supporting structures of a city. Yet POS in China are far behind the developed countries in amount, identity, accessibility, availability, diversity, et al. The possible questions on the configuration of POS include which roles POS play in city image and city structure, which kind of POS should take this responsibility and how, et al. 2) At meso scale, POS are the facilities

for diverse cultural activities of all people. While the inequality of POS configuration in China is currently severe between different neighborhoods. The type, abundance, diversity, rarity of cultural activities should be the core of POS configuration at this scale. 3) At micro scale, POS are the material container of everyday life. However, massive POS are confined within grand narrative in design, ignoring the humanistic care of daily use, exacerbating the alienization of urban residents' everyday life.

On the other hand, the “infrastructural turning” in urban planning field driven by the “material turning” in cultural field define the potential dimensions of the interrelations between individuals and cities and offer a methodological framework for cultural practice accommodation in POS research and planning practice. Infrastructure describes a set of conditions within which human action plays out, giving rise to cultural conditions shaped in varying degrees by its unequal shape and distribution. The interrelation between human and POS and the mechanism how cultural practices and CES are generated in POS can thus be explained in 4 dimensions: 1) Subject-Object dimension. From which we focus on the subjectivity of human as well as the services the objects (here namely POS) can offer. 2) Virtue-Reality dimension. From which we focus on the new interaction scenarios in POS with the help of internet and sensible devices. 3) Spatial dimension. From which we focus on the roles POS play at different scales. 4) Dynamic-Static dimension. From which we focus on how we humans interact with things and non-material things, and how things change people's perceptions, reactions, and interpretations, and have an impact on people themselves. This offers reference for POS regeneration strategies and practices.

We interpret the mechanism of CES in POS from the above 4 dimensions with case studies in Shanghai (China), Munich (Germany) and London (the UK). Then we propose a set of quantitative indicators to evaluate CES performance of POS at different scales and apply it in Shanghai to valid our hypotheses. At macro scale, the indicators are measured by location-based service information in 10 cities in China. At meso scale, the indicators are measured by street view image recognition in different neighborhoods in Shanghai. At micro scale, the indicators are measured by Public-participative GIS in Youyi District in Baoshan District. The results correspond to the hypotheses of POS' roles above, and display some differences concerning different location and economical status of case cities at micro scale, concerning the scale, quantity, function of architectural cultural facilities and their spatial relationship with POS, etc. at meso scale, and concerning the quantity and quality of POS as well as demographic differences at micro scale. It indicates that CES evaluation could be a practical tool for POS' performance evaluation and could be applied to the identification of POS' roles and proper planning orientation.

Our general lines of argument are: 1) Cultural infrastructure perspective offers a theoretical framework of how POS could be integrated into urban context at different scales based on their infrastructural and cultural attributes. 2) CES evaluation is a practical tool to identify POS' cultural features and to set proper planning goals in POS planning. 3) The interrelation between POS and human can be interpreted in 4 dimensions, and this helps to explain the mechanism how CES and cultural practices are generated in POS, thus contributes to POS regeneration practices at different scales.

04

From the River, Towards the City: A Creatively Critical Mapping of the Graffiti and Visual Pluralities of the Varanasi Ghats

Keywords: Ghat graffiti; Varanasi; Visual Culture; Urban Nature; Visual Ethnography

Subhradeep Chatterjee ¹

(1) Indian Institute of Technology Kharagpu, India

Graffiti, by virtue of their visual and expository nature, are undeniably ethnographic ventures since they intend to address the audience with issues and instances derived from observations of and responses to the society. Quite expectedly, urban nature forms a major part of the panel or canvas when agential subjects are portrayed. As a multimodal venture of ethnography, the entire project of sociological reproduction becomes starkly apparent through these many modes of visual politics.

Elements of the modern city are intricately linked to the urban nature they have placed (or, if I may, encroached) themselves upon. A steady seepage of urban nature elements occurs in the artworks that depict city life - from graffiti to graphic novels to other visual media. Conversely, and quite interestingly, graffiti often seeps into urban nature sites and integrates the natural elements in visual oeuvres. In such a scenario where both encroach upon the other's space, it becomes imperative to critically consider how the process occurs through the lens of Visual Studies not as a purely analytical and didactic exegesis but as a methodological exploration where the ethnographic projects of these illustrations are engagingly interrogated and counter-conventionally negotiated. The cohabitation of the visual and the urban becomes a synergy of the multi-agency figures which adapt and counter-adapt with the locational issues, riskscales and challenges.

My proposed paper (and talk) will set out to critically examine a select set of graffiti from the ghats of Varanasi with the lens of Visual Culture and Content Analysis to interrogate the dominant themes present in those unsanctioned works and also attempt to interpret their semantic trajectories in relation to how the theme of the river and (its) water is explored, visualised and concatenated in them. At the outset, it would be useful to note (and state) that using a select of graffiti cannot grasp the essence of the ghat graffiti of Varanasi; at the same time, studying a select set in relation to the above theme would shed some light on their visual politics and placement on an element of urban nature (i.e., the ghats) along with their pleas, messages and aims/purposes.

The city of Varanasi is arguably urban - perhaps not in comparison to the metro cities but definitely in its cosmopolitan endeavour of attracting tourists from all over the world and catering to urban tastes and luxury amenities. As a major city in the state of Uttar Pradesh and as a site of tourism, pilgrimage and other religious activities and paraphernalia. The ghat walls are filled with numerous graffiti instances with the ubiquitous image of the Hindu god Shiva smoking marijuana in a chillum serving as the dominant one. Other instances include sceneries, figures and moments with water as a major and dominant theme or element.

Initially, the select set of graffiti will mainly be sourced from images available on the web in news articles, art and travel blogs, and travel videos. Based on the scope they open up and situations permitting, a visual ethnography of the ghat graffiti might be attempted by visiting the sites and recording those instances. This can range from still shots for creating a photo essay-like section in the proposed paper to sketches made from the visits. This will be achieved through transect walks

at the ghats and the river along with collecting brief comments and views of the locals regarding how they perceive the graffiti. While this aspect remains open-ended as of now, every attempt will be made to creatively (but critically) document a select set of graffiti and coherently sequence them to form a narrative that would aid in the visual analysis process.

Methodologically speaking, the initial approach would include Content Analysis and the critical lens of Visual Culture. But, as a tangent to the usual methods, my proposed paper will incorporate a narrative structure into how the graffiti images are sequenced and analysed. If the transect walk is realised, then the comments from the locals can be incorporated into the narrative flow thus shaping the relevant section as a narratological venture on a creative (but critical) level.

While most of the graffiti instances from the ghats consist of religious figures like that of gods and goddesses, others are of advertisements for hotels and restaurants. Interestingly, in many of the religious instances, water and the river imagery remain as a major theme. Some have the holy river in the background while others depict rituals being performed on the ghats and in the waters along with rituals involving water. The multi-agential actors around the ghats play a crucial role in both painting the artscape on the ghats as well as being related to the urban economy that is dependent on (and sometimes affected by) them. The roles of these often-invisible actors (since most of the works are unsanctioned) will be shed light on through this visual ethnographic method which will be attempted in this proposed paper/talk.

In toto, the paper will critically examine the graffiti visible on the ghats' walls and document them using a creative approach so as to sequentially arrange them and form coherent narratives which will aid in the theme analysis. As a limiting principle, the focus will be on the portrayal of the river (and river and urban economy dependent on them) and how their presence is perceived by the locals (and even tourists). Further, the role of the graffiti artists as multi-agential actors contributing to the ghat economy will be briefly observed and critically reflected upon.



SMUS 23_23

Digitalization, Political Participation and Transformation in the Global South

Session Organisers:

Gabriel Faimau, Langtone

Professor, University of Botswana

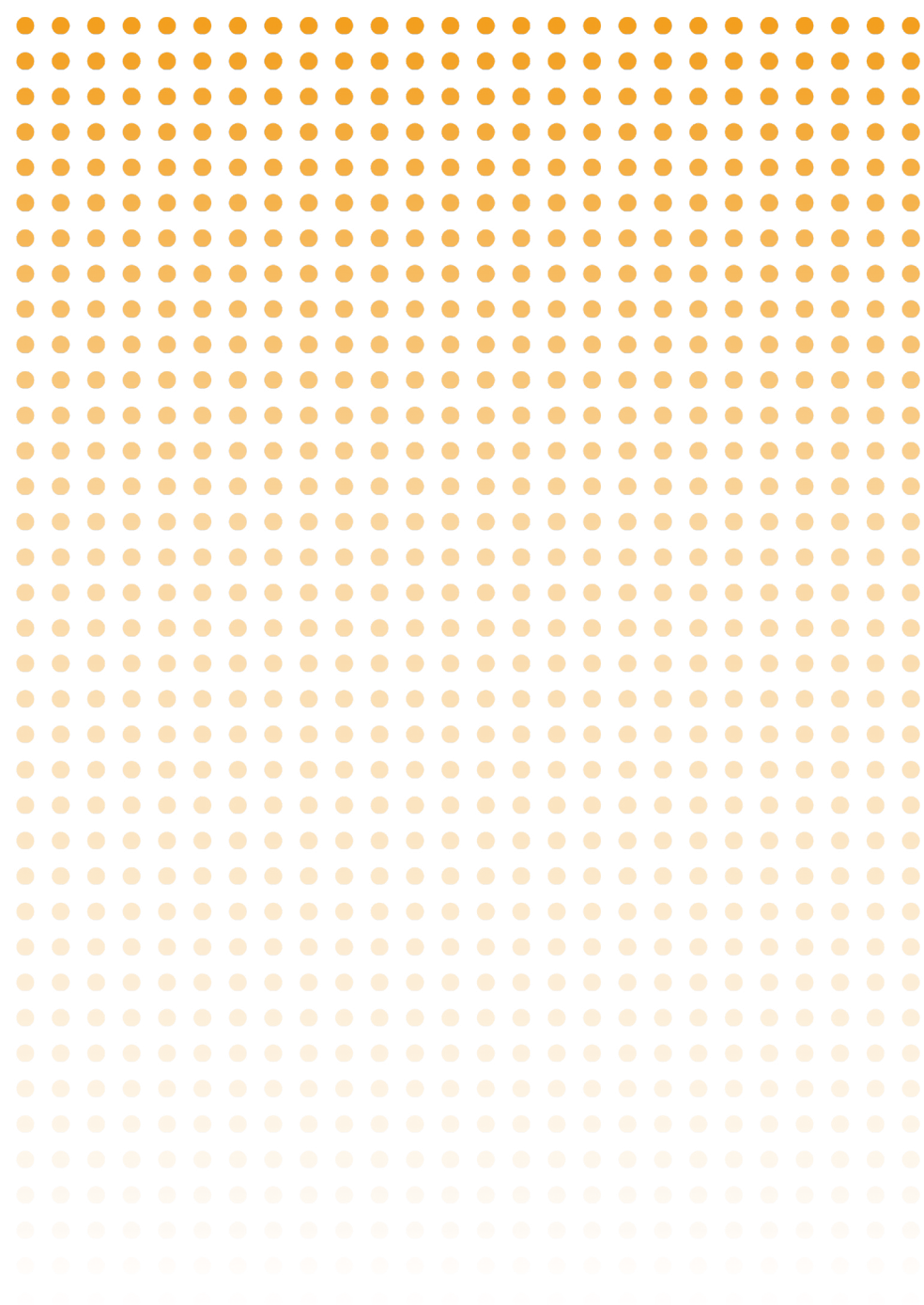
Langtone Maunganidze

Senior Lecturer & Research Scholar, Midlands State University

Dawn Lyken-Segosebe

Senior Lecturer, Botswana International University of Science and Technology





01

Online Media Research: Exploring Social Media Analytics and Digital News-Media Coverage of 2019 Malawi Elections

Keywords: Social Media; Big Data; Social Media Analytics; Twitter; Facebook; Malawi Elections

Anthony Mavuto Gunde ¹, Jimmy Kainja ¹

(1) *University of Malawi, Malawi*

The rise of the internet has offered exciting opportunities for media and communication scholars to conduct research by employing multiple innovative and much easier methods previously unavailable to researchers. This study examines ways in which Social Media Analytics (SMA) could be used to capture, monitor and analyse big political data from social networking sites during electioneering in emerging democracies. Nevertheless, one key research method that has been of great interest among media and communication scholars in the digital age is that of SMA. It is concerned with developing and evaluating informatics tools and frameworks to collect, monitor, analyse, summarise, and visualise social media data, facilitate conversations and interactions and also to extract useful patterns and intelligence. SMA is an emerging interdisciplinary research field that aims on combining, extending, and adapting methods for analysis of social media data. This research study is drawn from 2019 Malawi tripartite elections in which the country's leading electronic and print media houses, for the first time in history, covered the elections through the live-streaming of Twitter and Facebook social networking sites and the implications on their media audiences thereof. In May 2019, Malawi held tripartite elections and the Malawi Electoral Commission declared President Peter Mutharika of the governing Democratic Progressive Party winner of the elections amidst voting irregularities which forced other main candidates contest the results in a Constitutional Court leading to months of political turmoil and protests by social movements. The electioneering period and consequential political unrest led to myriad Twitter and Facebook conversations. This study employed SMA, using hashtag #MalawiElections2019, to examine the extent of social media use – tweets and Facebook conversations – from leading media organisations and influential commentators during the elections period. The study revealed that Twitter and Facebook content from Malawi's online news-media to a large extent, had significant influence on social media conversations in the Malawian public sphere. It was further established that digital research methods, in this context SMA, provide invaluable tools for news-media and communication researchers specifically with regards to big data. This article reflects on the potential of digital technologies in the enhancement of data collection and analysis of online social media news which has previously been a challenge for researchers utilising traditional – manual – methods especially from sub-Saharan African developing democracies.

02

Netnography in Social Networking Sites – An Exploration of Cybercultures in Consumer Groups

Keywords: Netnography; Virtual population; Social networking sites; Cyber stalking; Virtual platforms

Sonali Srivastav ¹, Shikha Rai ²

(1) National Institute of Fashion Technology, Panchkula, India

(2) SOJNMS, IGNOU, India

Social networking sites (SNS's) allow for formation of groups of individuals united by a cause, interest and at times even a brand. These groups could have a hundred or a billion members, ranging in their degrees of involvement. With such huge numbers, quantitative studies such as surveys, or highly selective qualitative studies such as interviews remain only popular options to study audience behaviour. Netnography (Kozinets, 1998) is an online adaptation of on-field ethnographic study. It allows for a qualitative as well as a quantitative approach with the use of various methods and tools adapted for a computer mediated field.

This paper explores the various approaches and tools of Netnography, their uses and perceptible outcomes and compares it with those of other methods of studying virtual populations. With a review of select studies and research papers on Digital communication research methodologies and virtual sociological paradigms, the study evaluates the pros and cons of adopting this research method. Lastly, the paper also discusses the ethical repercussions of online observation vis-a-vis cyber stalking.

03

Gentrification, Square Dancing and the ‘White House’: Social Media and the Production of New Public Spaces in Guiyang, China

Keywords: Public Spaces; Social Media; Chinese; Gentrification

Cheng Zhang ¹, Jung-Che Chang ²

(1) *School of Architecture, Southeast University, China*

(2) *Shaoguan University, China*

If we use “Guiyang Culture and Art Center” as a keyword, then its popularity and clicks on various online short video platforms like TikTok can only be described as “mediocre”. However, if the hashtag - “#” is changed to “Guiyang White House”, we will find in short video platforms that its “likes” will reach tens of thousands or even hundreds of thousands, making it an “online celebrity landmark”.

As Guiyang Culture and Art Center, this huge building is obviously not operated and managed, and it is not open to the public usually. So, it is temporarily close to an anonymous existence and almost becomes a forbidden place in reality. There are even “urban legends” about its use, property rights and even the cost of its construction. But its image has become an urban symbol of the free-flowing on the Internet: since late 2018, thousands of citizens danced square dances in unison in front of the building every night, and the scene, while live streamed, got millions of likes. And Baidu map even included this building, with “White House” as its name.

This paper will specifically investigate the time when “Guiyang White House” appeared on social platforms and the distribution of keywords, try to understand the imaginative renaming process of Guiyang Culture and Art Center to “Guiyang White House” by netizen, and analyze how its shaping the offline city and the public life from its citizens through the online urban landscape of live broadcast and network space.

04

Coping with Gatekeepers in Digitalized Political Participation Research**Keywords:** Digitalization; Gatekeeper; Networked; Political Participation; Virtual CommunityLangtone Maunganidze ¹*(1) Midlands State University, Harare Campus, Zimbabwe*

The emergence of digital technology through social media use has triggered new forms of both political mobilization and resistance calling into question the efficacy and sustainability of the traditional ‘opening and closing’ of channels and gates to researchers. Regarding political participation, different stakeholders have increasingly become aware of the potency of both intentional and accidental exposure to mediated or digitalized information in fostering both individual and collective behavioural changes. Studies measuring political social media use have constantly found positive political participation effects (Bachmann and Gil de Zuñiga, 2013, Ekstrom et al., 2014, cited in Knoll et al. 2020, p. 136). Social media as a ‘form of information activism,’ (Halupka, 2016), breaks the traditional political orientation boundaries and collapses contexts (Boyd, 2006, Vitak, 2012). This context collapse allows ‘users to quickly diffuse information across their entire network and facilitate interaction across diverse groups of individuals who would otherwise be unlikely to communicate’ (ibid, 2012: 451). Online political participation or engagement is both collective and connective (Halupka, 2016) with relatively uninterested or seemingly apolitical users incidentally getting exposed to political information. Social media technologies tend to collapse multiple contexts and thus bringing together distinct audiences across socio-political, economic, religious and cultural divide. Drawing from the network gatekeeping framework, Barzilai-Nahoni (2006), reinforces the above observation, arguing that cyberspace offers users the opportunity to choose their affiliation to communities without imposing relationships as what normally obtains in non- virtual communities.

The traditional definition of ‘gatekeeper’ no longer seems useful as the roles of ‘gatekeepers’ and the ‘gated’ have become more fluid and interchangeable (Helberger, Kleinen-von Koningslow and Van der Noll, 2015). Although virtual anthropological fieldwork could successfully overcome the challenge of traditional gatekeepers through the exploitation of opportunities created by digital technology, the emergence of online political participation pose both empirical and ethical challenges. The use of social media tools such as WhatsApp to gain access to research populations can be an effective strategy in dealing with troubling gatekeepers. Scholars such as Roberts (2005), Chin-Fook and Simmonds (2011), Bro and Wallberg (2014), and Kovacs (2017), found the use of internet or digital sources effective information gathering instruments without physically labouring past the traditional gatekeepers. In cases where trust between outsider and participants would have been established the new media may facilitate communication free from gatekeeper ‘surveillance’. However, in countries such as Zimbabwe there has been attempt by authorities to enact legislation and create supporting institutions to reinforce the surveillance or censorship.

Social media can be used as a research instrument and intermediary requiring more innovative ways of surveillance which inadvertently raise numerous empirical and ethical issues. For instance, gaining access and consent from online participants such as Whatsapp networks and groups may not follow the conventional protocols common with the traditional gatekeeping but may potentially raise challenges. For example, Gelinas, et al. (2017) considered (i) the ethical significance of

compliance with website “terms of use”; (ii) the ethics of recruiting from the online networks of research participants; and (iii) the ethical implications of online communication from and between participants. Investigating online political participation patterns may persuade researchers to engage in surreptitiously or covertly amoral data collection practices as a way of getting round the regulatory mechanisms protecting access to both gatekeepers and the gated. According to Barzilai-Nahon (2006), in a networked world or virtual communities, the community itself may prove to be one of the most powerful gatekeepers, since it is able to use self-regulation mechanisms of gatekeeping. In the context of the digitalized political participation space, due to the deteriorating ability of formal regulators and institutions to enforce power on both the researcher and the gated, there is an advertent delegation of control to networked community leaders or administrators. However this level of gatekeepers play a dual role of guarding the communities and at the same time exploiting power and manipulating information to adapt to their interests (Barzilai-Nahon (2006). Thus one challenge for researchers is the ability to identify the right gatekeepers. As Laidlaw (2010), observed that the emerging ‘Internet Information Gatekeepers’ are difficult to identify given their multi-faced outlook and evident in their tendency to perform and vacillate between various and seemingly isomorphic roles.

In the African context even under relatively democratic regimes, the emergence of digitalized political participation has heightened the desire for controlling or monitoring its influence at both individual and society levels. This has become much more demanding than ever before igniting both new ways of gatekeeping and resistance that inevitably motivates much scholarly and research interest. There is little doubt that the nuances and dynamics of gatekeeping have a profound capacity to facilitate and inhibit the research process. In the context of digitalized political participation both researchers and gatekeepers have continuously designed new ways of outwitting each other. Drawing from the Zimbabwean experience, this paper examines the challenges and opportunities posed by gatekeepers in digitalized political participation research. Although the phenomenon of gatekeeping and its associated challenges in research is not new, studies focusing on its dynamics in the context of digitalized or virtual communities have been limited.

05

Loss of Control in Digital Urban Planning? Investigating the Role of Digital Tools and Algorithms, their Challenges and Possibilities for (Participatory) Planning Processes**Keywords: Digital Urban Planning; Algorithms; Spatially Distributed Work; Mechanical Co-Construction Of Urban Spaces; Loss Of Control**Gabriela Christmann ¹*(1) Leibniz Institute for Research on Society and Space (IRS), Germany*

The author reports from a sociological research project entitled “Digital Urban Planning”, which was carried out within the framework of the Collaborative Research Centre “Refiguration of Spaces” at the TU Berlin (Germany). Using the example of planning offices in Lagos (Nigeria), but also in New York City (USA) and Berlin (Germany), she presents how the investigation of digitalisation processes and digital practices in the context of urban planning as well as the transformation of urban spaces was methodically approached. Methodologically, the focus is on the question of how the digitally supported spatial construction of planners and the co-construction of algorithms can be made observable. In this context, a methodological approach will be presented that draws on traditions of workplace studies and is essentially based on participant observation.

In addition, the presentation discusses the consequences of digitalised planning, which is influenced by algorithms and often takes place translocally, for the spaces to be planned, by looking at the challenges, but also the opportunities that arise from this. Algorithms evaluate data by processing the decision-making routines programmed into them for this purpose (e.g. in GIS or Computer Assisted Design software). However, the underlying decision routines are difficult for the user to understand. With the use of digital tools, planners decide to delegate their decisions to a certain extent to technical instances, i.e. to no longer decide for themselves. Against this background, it must be stated that the solutions for urban spaces developed by planners are always co-constructed and mechanically shaped by algorithms and their non-transparent decision-making structures. In addition, in spatially distributed planning processes, from widely dispersed workplaces around the world, usually only a few members of the planning team still have direct experience with the respective urban spaces they are working on. Strictly speaking, therefore, there is a loss of control by the actors in the creation of planning solutions for urban spaces (not only in urban planning in the Global South!). However, the presentation will not end on such a fatalistic note, but will also hint at new possibilities of digital planning alongside these challenges and argue that participatory approaches in urban planning are more necessary than ever.

06

Participatory Spaces, Urban Governance, And Citizen Participation in the Indian Smart Cities of Bhubaneswar and Bhopal

Keywords: Indian Smart Cities; Citizen Participation; Smart Citizens; Participatory Spaces

Maitrayee Mullick ¹, Archana Patnaik ¹

(1) Indian Institute of Technology, Kharagpur, India

The National Smart Cities Mission (SCM) in India strives to provide urban governance participatory spaces to its citizens. However, research highlights a scathing ambiguity in providing such participatory spaces to Indian citizens. Most of the research on the given discourse concentrates on the non-inclusive nature of smart cities, ignoring engaging with the citizens and considering their opinion on governance. Further, the interaction between the participatory spaces and the citizens is less ventured empirically among the scholars in the Global South. Thus, this paper aims to address this methodological gap. With the rising digitization and technological transformations of smart city interventions, the need to include citizens is becoming paramount to make the cities sustainable. This paper addresses the outcomes of the digitalization attempts within Indian cities and the position citizens occupy within the offered participatory spaces. As the session addresses the digitalization trends, citizens' political participation, and their transformation in the global south context, our study will contribute to the given perspectives and extend the discourse from the Indian context.

We draw from Cardullo and Kitchin's (2019) 'Scaffold of Smart Citizen Participation' and use it as a conceptual tool for the paper. Since there is a lack of a model that can analyze the participation of citizens in the Global South, especially in the governance of the Indian smart cities, we also attempt to extend the model to understand different perspectives of participation by the citizens themselves, drawing from our empirical data. Our sample comprised the technologically-equipped citizens of the two selected smart cities of Bhubaneswar and Bhopal. These cities were positioned within India's top twenty smart cities in their composition of citizen-centric proposals comprising a larger technologically engaged urban youth population. We gathered primary data through an online survey from 252 respondents through snowball sampling between the ages of sixteen and forty, representing the majority of India's technologically-equipped urban population between January and July 2022. We performed quantitative statistical analyses, including descriptive statistics, correlation, and regression analysis, to assess the nature of participation of the citizens within the smart cities concerning urban governance. Through the analysis, we also assess their positions within Cardullo and Kitchin's (2019) Scaffold of Smart Citizen participation.

Through this paper, we will argue how 'propertied citizenship' with digital capabilities does not correspond to active citizen participation within Indian smart cities, contrary to what is assumed in developed countries. In understanding citizen participation within the scaffold, the study finds that most citizens relate to the rungs of non-participation and consumerism within the model, which comprise minimal participatory elements within a smart city. The study also infers low relatability of the citizens to identify themselves as actual smart citizens performing roles of 'co-creators' and 'decision-makers.' Thus, in this paper, we would argue how creating participatory spaces, especially in countries like India, through citizen engagement within urban governance is more critical for citizen participation than just creating digital spaces for smart citizens.



SMUS 23_24

Cross-Cultural Research Methods in Community-Oriented Approaches in Human Behavior

Session Organisers:

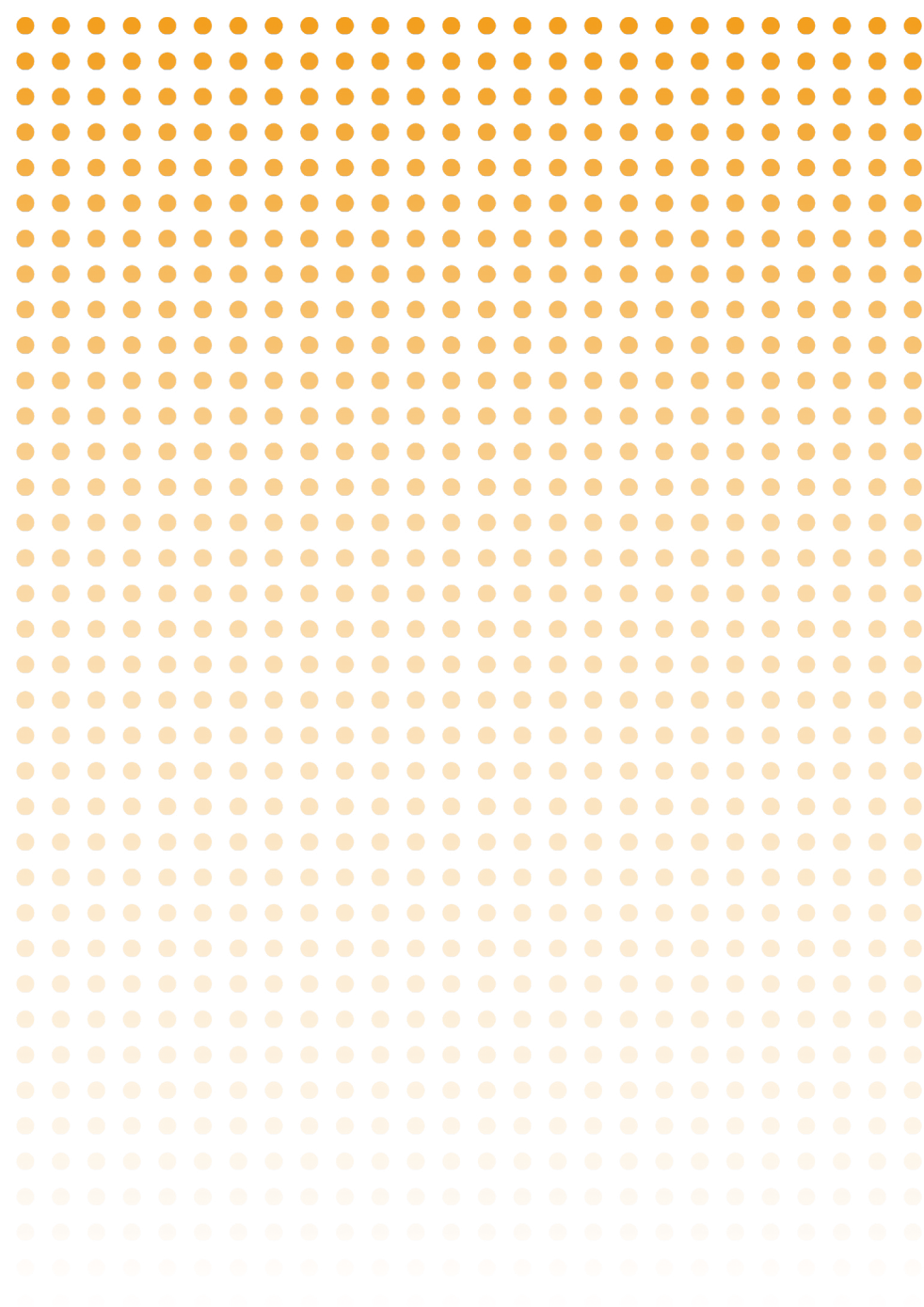
Manish Kumar Asthana

Assistant Professor, Indian Institute of Technology Roorkee

Jakkrit Sangkhamanee

Associate Professor, Chulalongkorn University





01

Socio-Cultural Behavioral Perspective and WASH Practices in India

Keywords: Socio-Cultural Behavioral Perspective

Dipak Abnave ¹

(1) Tata Institute of social Science, Tuljapur Campus , India

Sanitation-related human behavior is embedded and shaped in the socio-culture context. These socio-cultural determinants are obstacles to accessing modern sanitation services. Water, sanitation and hygiene (WASH) practices are poor in India. WASH Practices have been strongly associated with social norms and cultural aspects. The socio-cultural factors like strong attachment to old traditions, level of reliability towards habits of forefathers, poor priorities to hygienic behaviors, rigid norms, the rigid mindset of the people, cultural taboos, stereotypes, indigenous methods regarding WASH and love towards cultural identities & forefather's habits are the cultural barriers towards safe WASH practices.

Human behavior is influenced by the environment, family, society and culture. Behavior change is influenced by many interrelated factors, such as the perception of risk or benefit related to a given behavior; the skills and belief in the ability to change; access to resources necessary to perform the new behavior; and norms and values within the family, community and society that make the behavior acceptable. Successful WASH behaviour change interventions are often underpinned by theories or frameworks from a range of disciplinary backgrounds, including health psychology. Sanitation has been integrated as part of society and culture. Sanitation issues in India were fixed with technological solutions and interventions. Sanitation is embedded in society and culture through caste, class, gender, and ethnic dimensions. In the Indian context, there is a need to describe and analyze socio-cultural behavioral aspects of sanitation. People are reluctant to use WASH services due to "cultural beliefs" and "psychological reasons". The cultural perceptions toward water and sanitation are considered an "obstacle" to the implementation of new technology in the WASH sector.

The present paper will examine the socio-cultural barriers to safe water, sanitation and hygiene practices in India. It highlighted key socio-cultural issues in sanitation, such as social norms, disparities, regulation, and health impact. In India, What is clean, dirty, purity and pollution is a complex issue WASH sector. This study has used the Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS) approach to explore behavioral change and sanitation issues in India.

02

Developing Sustainable Solutions at Intersections: For Community Health and Well-Being**Keywords:** Social Sustainability; Community Well-Being; Health-In-All-Policies; Participatory ResearchUlrike Fettke ¹, Susanne Fersch ¹, Prof. Elisabeth Wacker ¹*(1) Technical University of Munich, Germany*

A common denominator in community life is the desire for well-being. For this, health and belonging must go hand in hand and are a primary concern for the communities entrusted with public provision of municipal services of general interest. To achieve sustainable well-being, economic, environmental, and social needs have to be addressed through actions upon equity, health, needs, participation and diversity (Barron & Gauntlett, 2010; Ross, 2013). Nevertheless, in most interpretations of sustainability, the social dimension has been neglected (UN 2014).

Science often applies Community-Based Participatory Research (CBPR) to respond to eco-social problems in a way that fits to local needs and expectations. CBPR creates positive and sustainable change with and for communities through their active participation in the research process (Wallerstein et al. 2017). Thereby, many features of the CBPR process correspond to principles that guarantee the sustainability of Sustainable Development Interventions (WHO 2014) for which Health in All Policies (HiAP) is a cross-cutting task to be considered in all social development interventions (WHO 2014).

By two examples of community-based participatory field studies in Germany, this presentation illustrates the contribution of CBPR and HiAP for research to tackle issues of health and belonging in a sustainable way.

The research project “Wohnungsleerstand wandeln (WohL)” [Worthy Places from Unused Spaces]” aims at identifying and discussing possibilities for improving the housing supply besides the construction of houses by discovering the motive(s) and experiences of the owners who do not use living space. The second project “Bedarfe benennen | Brücken bauen | Gesundheitscampus entwickeln (b4)” [Identifying needs | Building bridges | Developing health campuses]” presents chances and challenges for equitable rural health care through a new kind of mutual cooperation project between university medicine and regional health care providers. Experiences of both projects will be discussed in the light of their potential to sustainably reduce unjust diversity and disadvantages at the community level. By examining implications with regard to research design, particular attention is paid to how solutions can be found for social sustainability.

03

Satellite Towns: Urban Design and Planning and Provisions for Mental Health - A Road Forward with the Case of Navi Mumbai

Keywords: Mental Health; Urban Design and Mental Health; Satellite city; Smart City Mission

Suvarna N. Thakare ¹, Subhankar Nag ²

(1) Pillai college of Architecture, New Panvel, India

(2) Aakar Abhinav Consultants, Navi Mumbai, India

After the evolution of human beings about 2.5 million years ago, humans continued to be hunter-gatherers. The agricultural revolution about 12,000 years ago led to farming as a means of livelihood, which was the key to formation of human settlements and villages.

The development of cities is relatively new and cities seldom serve a single purpose like villages. Cities offer a complex web of services and the core of any city is the economy, contrary to emotional connection.

As per the UN Habitat World Cities report- 2022, urbanization shall tremendously increase in the world, and in India by 2030, 43.2% population shall reside in urban areas. Due to the high rate of urbanization to control the growth of metropolitan areas, the development of satellite cities is on the rise. In India there are very few cities that are planned satellite cities, in many cases nearest municipal council act as a satellite for the parent city. 'Smart City' is a catchword for the new age urban development. The Smart City Mission launched in 2015, with an aim for urban renewal and retrofitting has few satellite cities included. On the other hand, mental health is a critical issue in the world and India. UN Habitat World Cities report- 2022 highlighted that health in urban areas is multilayered which needs to be address with multisectoral and multidimensional approaches.

This paper aims at studying the urban planning considerations for India's planned satellite towns with an aim to arriving at urban planning and design strategies which can be used to influence the betterment of the mental health of the citizens. Navi Mumbai, a satellite town is studied with an aim to understand gaps in urban planning and policies at local level through structured pilot public perception surveys of its residents. The study is further supported by secondary data from various reports like the UN World Cities report, The Smart city mission of India and, various mental health reports of India.

As per the UN-Habitat, Urbanization is a powerful mega-trend of the 21st century. The UN Habitat World Cities report- 2022 speaks about "Smart City" becoming a global catchword and a major policy paradigm for technology-driven urban innovation and development. It adds that city land expansion is going to increase in India by about 44% and that by 2035, about 43.2% of the Indian population is expected to reside in an urban area. Urban health risks are multi-layered and change rapidly, and the urban indoor and outdoor spaces are not diverse enough to address the health aspects. Therefore, cities should consider 'Urban health' in all policy approaches to progress in the 17 interlinked global goals of the Sustainable Development goals (SDG) set up in 2015. The report urges addressing mental health on priority for a continued economic and social development. Goal 3 of the SDG promotes 'healthy lives' and further goal 3.4 promotes reduction of mortality through noncommunicable diseases, and promotes mental health and well-being. The Comprehensive mental Health Action Plan of WHO 2021 prioritizes mental well-being through policy and law enforcement, resource planning, collaboration with stakeholders, Strengthening and empowerment of people with mental disorders.

The recent COVID-19 pandemic has triggered a significant rise in anxiety and depression, particularly among young people. In 2020, the global prevalence of anxiety and depression has increased by an estimated 25%, with young people and women most affected. This pandemic also widened gaps in addressing mental health care. By the end of 2021, the situation had improved somewhat, but still, is not satisfactory.

As per WHO, in 2019, 86 a million adolescents aged 15 to 19 and 80 million adolescents aged 10 to 14 had a diagnosed mental disorder, which indicates that mental health issues were prevalent even before the pandemic. The pandemic has added to the mental health issues due to the disruption of daily routines, stress over food insecurity & loss of family income, and, uncertainty about the future.

As per a report by Lancet 14% of Indians live with some form of mental illness. There is a treatment gap of up to 72-92% for various mental disorders and there is less than one mental health worker per lakh population.

India's total health budget for the year 2022 is 86200.65 crore (2.18% of GDP) for a 1.41 billion population, which translates to around 615 rupees per capita. For mental health total budget is 1035.39 crores out of which 670 crores are directly spent by MOHFW and 365.39 crores is indirectly spent through the ministry of social justice and empowerment. Indian citizens are in urgent need of mental health care and the allocated funds are used through selected public organisations. Presently, the multidimensional approach and integration of diversified agencies which work for human and city development are limited. As per the Indian Mental Health Organization, in an effective mental health system, intersectoral linkages are critical and must be strengthened.

As per David Halpern, in his book 'Mental Health and The Built Environment', specific factors such as housing, built density, design, land use heterogeneity and configuration, and, accessibility to key service destinations & public spaces affect mental health. Physical activities like walking, swimming, and jogging improve physical fitness and self-esteem which help dropping depression levels and improve mental well-being. A physically active person is more likely to engage in healthy behaviours like non-smoking, avoiding obesity, and not drinking excess. As per an article by Chinmay Sarkar (Towards quantifying the role of urban place factors in the production and socio-spatial distribution of mental health in city dwellers), Urban planning needs to follow a evidence-based approach, emphasizing the need to identify, anticipate and measure the social and health externalities associated with development and from an urban design perspective, the challenge is to find effective ways to optimize designs to create multi-functional areas that encourage a sense of community and social interaction, promote active lifestyles and minimize social disparities, which are detrimental to mental health.

Alike space science which defines 'satellites,' satellite cities are smaller urban areas which are planned to decongest the parent city and are sometimes promoted as a secondary growth centre, but in most cases, municipal councils or municipalities which are in proximity to the parent city see considerable growth in urbanization and act as a satellite city. In India, Hyderabad, Bangalore, Chennai, Chandigarh, Delhi, Ahmedabad, Mumbai, Pune, Kolkata, Raipur, and Guwahati have satellite cities. Generally, satellite cities fall within a radius of 100km from the Parent city. Many of its adjacent municipalities/ municipal councils acts as a satellite city for instance Thane, Kalyan-Dombivli in Mumbai.

Various typologies of satellite towns exist-such as Dormitory towns (Salt Lake City, Kalyan-Dombivali, Vikarabad, Kengeri); Tech industry hubs (New Town Kolkata, Hitech city, Faridabad, Mohali); Industrial towns (Pimpri-Chinchwad, Ghaziabad, Sonipat); Mixed use (Navi Mumbai, Tiruvallur), Educational hubs (Ponner), Residential and commercial hubs (Thane), Administrative towns (Gandhi Nagar, Dispur, Panchkula, Naya Raipur). Out of these satellite towns, New town Kolkata; Navi Mumbai, and Naya Raipur are some of the planned satellite cities and are among the selected 110 cities for 'Smart city mission' (SCM) of India. The purpose of the Smart Cities Mission is to "drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart." The emphasis is given to E-Governance and citizen services, Waste, water, and Energy Management, Urban mobility, and other.

The paper aims at studying Navi Mumbai, a planned satellite town as a case. In the initial conception of Navi Mumbai, its primary purpose was to contain the congestion on Bombay Island and its suburbs. Navi Mumbai has been developed as a planned city, a counter magnet for Mumbai. It has been developed as an independent, fully self-contained metro city by the City and Industrial Development Corporation of Maharashtra (CIDCO). Navi Mumbai has an area of about 689 sq.km under the Smart City Mission. The mission has 88 sub projects which include – smart organization, E-governance, Waste Management, quality of Life through Gardens and Playgrounds, Security, beside Provision of Basic Infrastructure like Roads, Water Supply, Power and planning of TOD areas around the proposed Navi Mumbai Metro.

From MOUD's Smart city mission programme list and Navi Mumbai's Smart city mission provision, clearly, more emphasis is given on social and public infrastructure development. According to Navi Mumbai's SCM quality of life will be improved through the planning of Gardens, Playgrounds, Security, and Special Projects like Urban Haat, Open Air Theatre, Exhibition Centre, and Museum. Findings of Pilot Public Perception Survey- Navi Mumbai:

The author conducted a pilot survey in Navi Mumbai with 28 respondents working in diverse fields and residing in various nodes in Navi Mumbai, with an aim to understand gaps in urban planning and policies at local level which contribute to mental well being. The survey explains that 89% of respondents travel to work in different parts of Navi Mumbai with 54% of them travelling by private vehicles, and 21% by autorickshaw and cab. It was observed that only 25% use public transport, indicating that public transport is not preferred whilst travelling within Navi Mumbai. The respondents informed overcrowded public transports (43%); unpleasant landscapes around suburban railway stations (18%) bad planning of station premises (4%) add to their daily traveling stresses. The respondents further informed that crowded unmaintained footpaths (18%), long travelling hours (14%), sound and air pollution (11%), fewer recreation spaces (14%) and ever-increasing traffic on the road (18%) are a big reason for daily life stress and anxiety. Though traffic on road gives rise to road rages, 89.5% of the respondents were not ready to give up on their private vehicle owing to overcrowding of public transport. According to 64.3% of the respondents, facilities like an open-air gym can help them to stay healthy and stress-free but only 32.1% of the respondents use them occasionally due to lack of time or non-availability of such facilities in their neighbourhood.

The survey indicates a need to have a transport system with better service levels (frequency), a better Urban design of the public spaces like the suburban railway stations with welcoming

features and/or a gathering space and plaza, good and wide footpaths free of encroachments to promote walkability, and well-maintained open spaces for usage of the residents.

Mental well-being is an important factor for continual economic and social development and a multisectoral approach is needed to address the issue. However, Mental Health Professions, as well as Urban designers and Architects are currently not made an active part of policy making or stakeholder collaborations, apart from the provisions in the Maharashtra Regional and Town Planning Act of 1966, which has suggestions and objections at multiple levels. The Smart city mission of India is limited to area-based developments only, and has no well-defined guidelines or implementation schemes attributing to mental wellbeing.

From the literature study and pilot survey, it can be stated that a multidimensional approach is needed in urban planning and designing which should include a mental health expert, Urban Designers, Architects apart from Urban Planners and other experts. The Smart city mission should also emphasize on Urban Design guidelines aiming to improve mental well-being, with a pan-city development approach for a homogeneous city development.

Mixed-use developments promoting 'walk to work' culture should be promoted in city design and retrofitting to reduce the load on public transport and decongest the roads which will directly help in improving mental well-being of the citizens.

Navi Mumbai is gifted with creeks and mangrove areas that can be developed as protected mangrove and flamingo parks, which will help in maintaining the green cover of the city along with new addition to the existing open spaces for relaxation and improving the overall mental well-being of the citizens.

04

Integration of MCDM and GIS techniques for Community Flood Resilience Assessment

Keywords: Community; Urban Resilience; Flooding; Methods; Resilience Assessment

Naveen Prashar ¹, Harshit S.Lakra ¹

(1) *Indian Institute of Technology Roorkee, India*

Due to climate change and environmental degradation, natural disasters are enormously increasing in capacity and frequency, and severely impacting human life. The impact of the disaster in terms of physical and social aspects contributes equally to the degradation of the quality of life. Natural disasters like floods, earthquakes, cyclones, cloud bursts and others have severe impacts, but flooding is more common and frequent worldwide. Flooding is the costliest natural hazard and urban areas are the more vulnerable and at high risk because of the high density and complex integration of the elements as mentioned in various articles and reports. Resilience is the new way to turn the flood management concept effectively. The interest in resilience and its assessment is also increasing to cope with the post-disaster events. Resilience is a new concept introduced by C. S. Holling in 1972 for ecological studies, but later it is used in other fields like disaster-related studies, psychology and behavioral sciences. Assessing resilience is a challenge because of the system's complexity and interconnectivity between the elements of the urban areas. Resilience is defined as a system's capacity to return back to a normal situation after a disaster. Resilience assessment is a way to check the ability to return to the same condition or adapt to the situation. Resilience assessment will help to quantify the level of resilience. In urban areas, Communities are the most affected depending on their varying vulnerability to the flooding condition and require attention to make interventions. This paper systematically reviews the literature on community flood resilience assessment tools and techniques. The major aim of the study is to examine the role of integration of the MCDM methods and GIS tools to assess community resilience.

Therefore, the selected keywords were aligned and a systematic literature search was undertaken. The data were collected systematically from the Scopus database and web of science using keywords as (TITLE-ABS-KEY ("Community" OR "communities" OR "neighbourhood*" OR "district*" OR "ward*" AND "flood*" AND resilience) AND TITLE-ABS-KEY ("measure*" OR "assess*" AND "flood*" AND resilience)). After the initial search, the total number of articles was 1018 extracted after removing duplicates. After filtering the data, 38 studies were finally included for the review process.

Analysis Framework: The literature was reviewed using the target/aim/objective-based framework and the key questions included are:

1. Current trends in the usage of a range of methods and techniques for the assessing community flood resilience
2. Approach and framework adopted for analyzing the community resilience
3. Finding the integration among various methods adopted

Common methodologies and approaches for assessing community resilience include indexing, integrated modelling, frameworks, and tools. Eleven (11) of the 38 overall research employed the indexing method, seven presented models, and 12 developed frameworks, and the remaining studies were evaluated using alternative approaches and methodologies. The community resilience

index was developed utilising the BRIC framework's fundamental selection criteria for indicators. Social, economic, physical, environmental, infrastructure, political, institutional, and governance are the broad categories for the variables incorporated by the many authors for assessment purposes. In the reviewed literature, numerous indices were discovered, such as the flood resilience index (Barreiro et al., 2021; Haque et al., 2022; Moura Rezende et al., 2019; Qasim et al., 2016; Rezende et al., 2019; Sudradjat et al., 2020; Zhong et al., 2020), the time-varying resilience index (K. Chen & Leandro (Gerges et al., 2022)). The purpose of constructing the index at the community level is to compare regions with low to high levels of resilience. Authors created a network structure model (DDAMTEL, ANP, and ISM), Bayesian network model, analytic hierarchy process-back propagation neural network (AHP-BP) model, an interpretive structure and network analyses method (ISM-ANP) for the assessment of the community's flood resilience while preparing the index. These modelling strategies aim to identify and rank the resilience indicators. Authors (Notaro et al., 2014) proposed an expert approach in the form of a Bayesian decision network that can evaluate the effectiveness of various urban flood retrofitting scenarios by considering all key water management variables and inherent uncertainty. A Bayesian network is a graphical model that combines probability theory and graph theory.

Coming to the developed framework review, various frameworks for community resilience assessment are presented, including strategy-based, operational, 6C-4R Environmental hazards 4S, FRMC, data-driven, drop, and group decision-making frameworks. (S. Dong et al., 2020) proposes an integrated paradigm that integrates the physical vulnerability of a community to disruptions in key facility access and its capacity to withstand such infrastructure disruptions. Authors (de Bruijn et al., 2019) proposed a framework for assessing community resilience in the face of disruptions to critical infrastructure caused by flood hazards.

The calculation of evaluation was based on the activity conducted, and various methodologies were employed to meet the research objective. The final resilience index was derived using a household survey, questionnaire, MCDM, and GIS techniques. The author achieved the preparedness, recovery, and response phases in the time-varying resilience index, operational measurement, and integrated and composite flood resilience index. Still, other indexes were only able to reach the preparedness phase. One must be able to apply social and economic indicators to the recovery estimation to determine the timing of the recovery process.

05

Analysing Residential Segregation- Case of Cities in Kerala

Keywords: Residential Segregation; Quantitative Analysis; Gorard's Index; Correlation Coefficient

Dimple Maria ¹, Nidhish P ¹

(1) College of Engineering Trivandrum, India

Residential segregation, the act of separation of groups based on any characteristics such as ethnicity, income, social status, religion, and culture, can be either voluntary that the people tend to live in any area that is convenient for them or as a result of pressure from outside sources such as real estate markets, laws, etc. Sometimes it has positive effects like Income and labor effects accruing from individual membership in local groups, political effects through more effective neighborhood voice that the segregated neighborhood can start collective actions easier than non-segregated neighborhoods. But sometimes it negatively effects with joblessness, health issues, poverty, educational inequalities, criminality, etc.

Studies on spatial segregation have been carried out frequently in the West, especially in the US, where studies on the discrimination of the African-American and Hispanic communities date back to 1925. In India, studies show that the residential segregation across groups increases in line with the rising discrepancy between any two groups in terms of these socioeconomic status variables, as per the patterns of residential distribution by income, education, and occupation groupings. India, being a developing country, this segregation can cause a significant impact on the nation's development.

The segregation studies in Kerala are continuing to be investigated by researchers. According to a study that aims to investigate the demographic, and socioeconomic profile of Kerala's three main religious groups, with a focus on the segregation of population by religion, variations in mortality and longevity of life, and future population by religion, residential segregation exists at various levels in the districts of Kerala. According to current studies, contributions to the field of segregation studies can be divided into four categories based on their goals: describing, explaining, analyzing, and measuring segregation. In this study, ward-level residential segregation in five municipal corporations in Kerala is measured using household and population data from the 2011 Census of India. When measuring segregation, various quantification techniques are available. The study measures the stated parameters determining residential segregation using Gorard's index. The study measures the residential segregation based on social factors like caste, socioeconomic level, and gender as well as physical aspects like access to in-house treated water facilities, in-house latrine facilities, and possession of two-wheelers. The ward-wise residential segregation in major corporations of Kerala is low and caste has been identified as having relatively a higher level of segregation among the social characteristics used. The correlation coefficient is computed between the proportion of SC/ST and the proportion of households and the spatial parameters to find whether there is a relation between caste and the facilities provided to the households in the cities of Kerala. The study arrived showing a negative correlation between SC/ST population and the availability of spatial parameters considered in the majority of the cities.

06

Analysis of Spatial Dependence Between Sanitation and Stunting in India**Keywords:** Improved Sanitation; Neighbourhood effect; Efficiency; Stunting; Spatial analysisDebasree Bose ¹*(1) Krishnagar Government College, India*

Swachh Bharat Mission is the biggest sanitation drive the country had experienced till date which involved enormous public spending. There are districts that utilized the available funds and other inputs in a comparatively efficient manner during construction of toilet in households that lack it. Subsequently, those districts are ranked high in terms of efficiency in producing output. Efficiency in output production must be replicated through greater impact on outcome generation. The study attempted to test the theory empirically by analyzing the effect of sanitation on stunting. Additionally, the study envisaged to capture the neighborhood sanitation effect on stunting through spatial regression analysis.

Firstly, study on determinants of stunting in early days of childhood have been performed vastly, even some recent studies have acknowledged the spatial dependence of child health across districts. On the other hand, association between stunting and sanitation has been recognized several studies. Still there is hardly any study which have shown the impact of sanitation on stunting including spatial weight to take care the understandable spatial correlation. The study has been attempted to bridge this existing gap in literature.

Secondly, efficiency in production has larger impact on outcome has been proved theoretically. But the empirical evidence of such deduction in social setting is scarcely available. The study will also fill the void by providing the empirically verified result to endorse the existing economic theory.

Thirdly, efficiency score computation allows to speculate production frontier that envelops production functions of all the districts. Therefore, efficiency of a particular district is not only dependent on its performance but also performance of other districts, mostly neighboring. Hence, spatial model is appropriate to analyze the following research questions.

Research Questions:

1. Does increase in sanitation coverage imply better child health outcomes?
2. Does higher efficiency have larger power to reduce stunting across districts?
3. Does space have any important role to play in determining the strength of association between stunting and sanitation?

Stochastic Frontier Analysis has been applied to compute the efficiency scores in producing sanitation output (viz. % of open defecation free Gram Panchayats, % of households with toilet) across districts. Generation of such output obviously depends on public funding in the form of subsidy for constructing toilet and expenditure on IEC (Information, Education and Communication) for triggering demand of having toilet among households. Hence, both these form of public spending contents the input segment for estimation of the frontier.

Multilevel Regression Model has been used to gauge the impact of sanitation development on child's health in early years by controlling other associated factors of child birth characteristics (low birth weight), household and socio-economic features and other nutritional support like

services from ICDS (Integrated Child Development Scheme) center.

Spatial Auto-Regressive Model estimated by the two-stage generalized least square method of moments to fetch out the effect of sanitation improvement as well as efficiency in producing sanitation output on childhood nutritional status weighted by geographical positional index of the districts.

Multilevel regression model and Spatial auto regressive models are applied with the same objective. However, in case of the former one no spatial weight are attached even though the existing data are spatially correlated. Hence, both the methods are used to capture the difference in strength of the key variable i.e., sanitation on social outcome i.e., child nutritional health status.

Spatial regression result shows that greater the efficiency in sanitation lesser the occurrence of stunting among the under-five children across the districts of India. Moreover, analysis of the National Family Household Survey (NFHS) of 4th (2015-16) and 5th (2019-21) round suggests that district efficiency score in sanitation significantly have greater explanatory power to explain the incidence of stunting among children compared to the share of improved sanitation across districts. Hence, both of the research questions get affirmative answers establishing a social experiment that successfully testifies that better utilization of scarce economic resources leads to a greater social outcome.

The study made a successful venture to analyze influence of sanitation on stunting through spatial analysis in Indian context. The results vividly portray significant spatial auto correlation of stunting as well as sanitation across Indian districts. The hot spots of stunting and cold spots sanitation are having locational similarities. Analyzing the regression results, it could be stated that level of sanitation is having abundant spill over impact through space to cause strong impact on child health. Therefore, singular or isolated effort to improve sanitation in a particular region will not deliver optimum reduction in stunting of that region. Rather, effect from neighboring regions has larger impact to enhance the child health scenario of the district. The results of the paper indicate the very fact that higher efficiency in production has larger impact on outcome. On the other hand, the country suffers from lower efficiency in most of the districts. Therefore, the results suggest that better output could be extracted out of given social funding (inputs) that will raise the efficiency and the same consequently improve the child well-being. Being a developing nation, crunch in public spending is an unavoidable problem. Hence, the study proposes policy makers and ground level implementers to mostly focus on efficiency in utilizing the available fund to reap the optimum benefit.



SMUS 23_25-01

Methods-Intertwining in Teaching, Research, And Practice

Session Organisers:

Fraya Frehse

Professor, Universidade de São Paulo

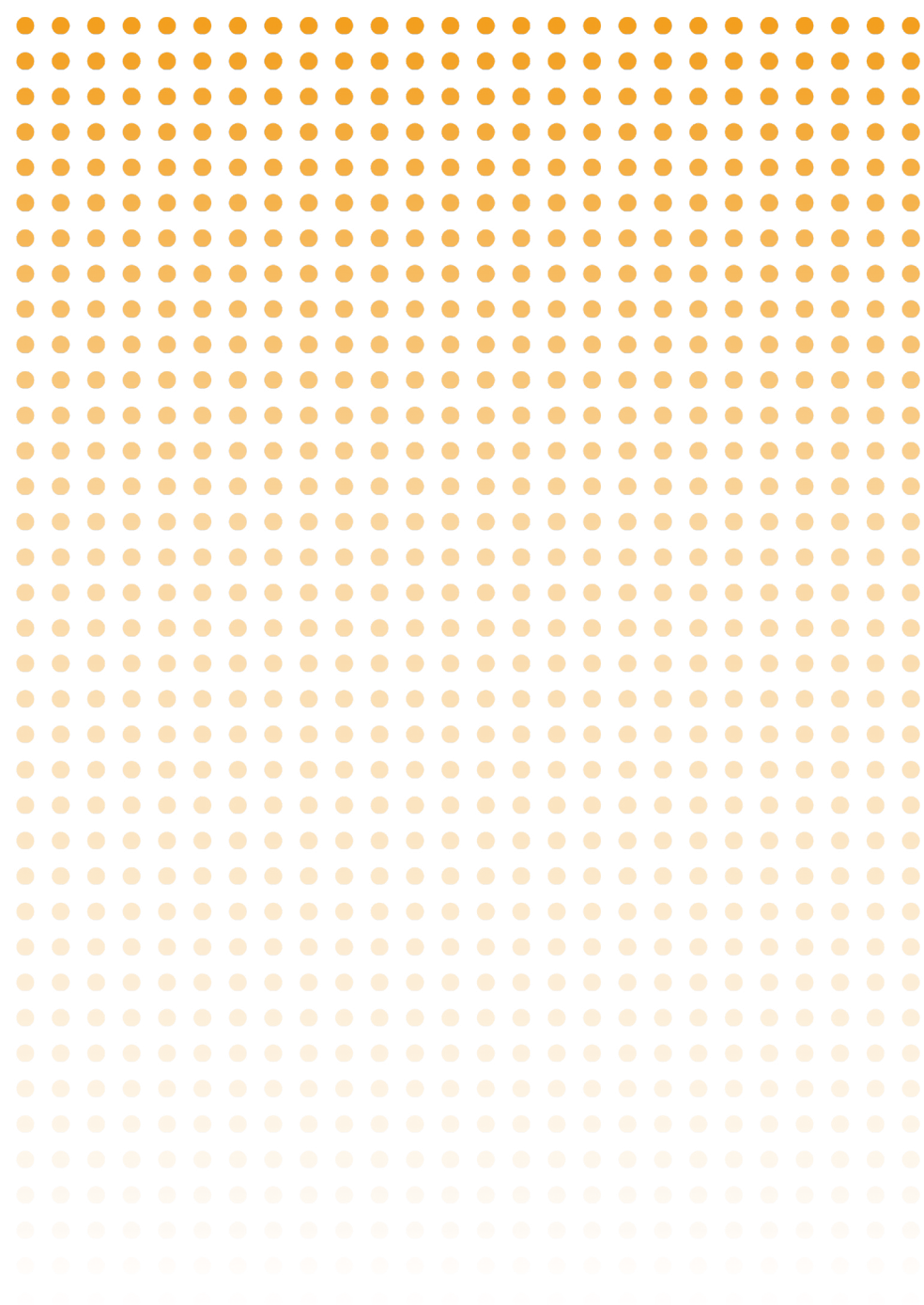
Angela Million

Technische Universität Berlin | Director, GCSMUS

Ignacio Castillo Ulloa

TU Berlin





01

Experience and Teaching: What does MOOC's Collective Production Tell Us About Spatial Methods?

Keywords: Spatial Methods; MOOCs; Social Housing; Research-Practice Collaboration; Urban Sustainability

Inês Martina Lersch ¹, Luciana Inês Gomes Miron ¹

(1) *Universidade Federal do Rio Grande do Sul, Brazil*

The present paper intends to discuss the methodologies adopted in the studies of informal settlements, presented in the Massive Online Open Course (MOOC) entitled “The Context of Social Housing in Southern Brazil”, produced in the year 2021 for the first generation's MOOCs of GCSMUS. The MOOC was organized by professors and students at the School of Architecture of the Federal University of Rio Grande do Sul, in collaboration with the Global Center of Spatial Methods for Urban Sustainability of the Technische Universität Berlin, funded by DAAD with funds from the German Federal Ministry for Economic Cooperation (BMZ).

This paper focuses on addressing the core question within the GCSMUS agenda about “how methods help in understanding urban space?” by aiming to (1) critically discuss the methodological approach of the four case studies presented on the MOOC: Povo sem Medo, Vila Nazaré, Cerâmica Anita and 20 de Novembro and (2) analyse the methodological differences between them.

The presentation is based on the author's experience of teaching an advance course on ‘Methodology and Epistemology’ as a part of the Master and PhD Program in Urban and Regional Planning (PROPUR/UFRGS). Furthermore, the reflection is motivated by the experience in the production of MOOC and what was learned from it. The construction of this article is understood as an opportunity to evaluate the work done.

The paper describes what we observed by collecting the data, systematizing the information and building the narrative about housing and the lack of it. What were the research methods and research strategies used in each case? It can be seen that, for all four case studies, there is a need to reduce the gap between research and practice to be bridged. In each of the cases, one can also observe examples of research-practice collaborations between scientific researchers and local practitioners. Moreover, Session 25 of the Conference provokes us to think about the work in interdisciplinary teams, when it proposes to discuss “the role of spatial methods in a transdisciplinarity research-practice agenda regarding urban sustainability”. Therefore, we also intend to reflect on the following question: what does MOOC's collective production tell us about methods? In other words, the process of producing the MOOC allows us to re-think and analyze the way the information presented in the course was systemized for the learners.

This paper, therefore, also seeks to share the experience of building the MOOC, as an experience of collective work. The course “The Context of Social Housing in Southern Brazil” discusses Brazilian housing problems, the squatting of vacant land and buildings, the urbanization of informal settlements, and technical assistance to social housing from the perspective of Southern Brazil. The context concerns the process of housing precariousness that started in the 1950s and 1960s and its geographical scope is the city of Porto Alegre and its Metropolitan Region.

This course was organized into five modules, each with five lessons. During the lessons, we present a historical perspective of the housing issue in Brazil. We present some concepts such as cortiço (tenement), favela, vila popular (informal settlement), maloca (shacks), homeless, squatting,

technical assistance for social housing and participatory processes.

For discussing the slum upgrading, two main approaches were developed. For one hand, an university extension project involving the work of academics and graduate and undergraduate students with slum communities. Through this project, we show the experiences of the squatter settlement Povo Sem Medo and we trace the land tenure conflict resulting from the removal of Vila Nazaré, required for the expansion of the Porto Alegre airport runway. On the other hand, a research project on technical assistance development process for social housing on the settlements Vinte de Novembro in Porto Alegre, and Cerâmica Anita, in São Leopoldo.

At the end of each module of the course, we propose some exercises and provide references for additional materials, such as texts, videos, and others. The course also offers a glossary with words, terms, and expressions used in the modules.

Looking for connections between academic and practice, we also seek the participation of community leaders, social movements and representatives of architects and urban planner's entities. To this aim we offered a workshop to debate issues related to social housing. This workshop helped us to validate many of the decisions made for the construction of the MOOC. This work also seeks to spatialize and present the method used in this meeting.

All footage of the MOOC was produced, captured and edited from home following social distancing protocols due to the COVID - 19 pandemic. The workshop was also online.

The structure of this paper is organized as follows:

1. presentation and critical analysis on the methodologies applied in the four empirical objects of MOOC;
2. presentation and critical analysis of the construction process, potentialities and improvements of the MOOC team; and
3. presentation and critical analysis of the contributions of working with multidisciplinary teams, as occurred in the workshop. We hope to contribute to the continuity of production and systematization of knowledge seeking to achieve some of the goals of the Global Center, with respect to educate (Action 1), Experience (Action 2), but especially to Enhance (Action 5) bridging the gap between urban research and practice.

02

Improving Spatial Cognition Abilities: Some Reflections from International Joint Design and Planning Studio Program – Diponegoro University, Indonesia

Keywords: Spatial Cognition; Design Studio; Planning Studio; Indonesia

Wiwandari Handayani ¹, Santy Paulla Dewi ¹, Artiningsih Artiningsih ¹

(1) Diponegoro University, Indonesia

Spatial cognition is one of the important competencies that needs to be learned by students in the field of urban design, planning, and development. Spatial cognition abilities are functions that enable people to deal effectively with spatial relations, visual spatial tasks and orientation of objects in space. It includes many specific abilities such as locating points in space, determining the orientation of lines/objects, assessing location and including motion in depth. As a method to recognize urban problems and issues in spatial perspective, the approach has been developing as an interest in the way people think about space and how they encode, store, and internally manipulate data to produce spatially relevant information. Spatial cognition exercise sharpens students' abilities on understanding of spatial concepts such as location, identity, magnitude, space-time, distance, direction, orientation, frame of reference, connection, network, region, spatial pattern, shape, and distributional characteristics such as density and dispersion (Golledge, 2004).

Design and Planning Studios are fundamental in the planning curriculum to train the students to having the spatial cognition abilities. On the value of studio pedagogy, it emphasizes on learning experience that connected to the real-world practice and problems. Conventional studio model is typically a combined field work and workshop course where students have a direct experience by observing the targeted intervention area to develop design solutions to a planning problem that may be defended in a classroom/real setting. Non-conventional studio is a more electronic and flexible. This includes the combination of conventional and virtual studio where students work remotely, as an exchange between universities in different countries. It might involve students from a variety of disciplines in order to foster greater interdisciplinarity. Indeed, the studio activities should encourage students' creativity and innovative thinking to response to various urban design and planning issues/problems by exploring not only based on secondary data (desk study) but also visiting the planning area, talk to the local people and make a connection to the places directly as a method to understand the area from a spatial perspective.

This paper aims at exploring spatial cognition as a learning process that should be effectively studied in the design and planning studio course, mostly through the international joint studio that involve different university from different disciplinary. International Joint Studio Program organized by Diponegoro University and some other University partners is an intensive, inclusive, and "pressure-cooked" cocreation process to integrate the experimental practices and evidence-based insights of science. Creating a multidisciplinary class through international joint studio program leads to richer ideas in connecting urban problem to various innovative solutions.

Mostly conducted for postgraduate students, the main objective of the International Joint Design and Planning Studio has been to give students the opportunity to understand and experience a major global - urban planning and sustainable development issue (such as urbanization and informal settlements, vulnerability assessment, urban public facility provision, land management, etc.) in a multi-cultural environment by giving them opportunity to have a direct field experience. Scope of

student works include: (1) Formulate coherent problems from complex, contradictory, unresolved challenges; (2) Generate fresh, critical and realizable responses to those problems; (3) Devise scenarios/pathways, towards achieving those responses (staging); (4) Consider small, medium and large scales (scaling); (5) Narrate responses with specific audiences in mind (narrating). Most of the studio output is urban regeneration ideas (design/development initiatives) to address particular issues in the selected sites (i.e., planning area).

The multi-disciplinary studio format provides a valuable learning environment in which to work collaboratively on a specific place-based project, exercising the students' spatial cognition abilities. The international learning experience enables students to unpack the differences in "design and planning cultures", to share diverse perspectives, to understand varying development interests, stakeholder motivations, and the nature of local circumstances and contexts that can result in improved learning outcomes. Indeed, the course provides an opportunity to have a broad view of the development of design and planning knowledge and skills in multiple and diverse ways.

03

Bridging the Gap Between Research and Practice: An Exploratory Qualitative Study of Urban Planning Practice and the Factors Influencing Practitioners' Use Of Research

Keywords: Urban Planning; Research Evaluation; Research Utilisation

Jacques du Toit ¹

(1) University of Pretoria, South Africa

Since the publication of the United Nations 2030 Agenda for Sustainable Development in 2015, questions have been raised about issues of transdisciplinarity, including the appropriateness of spatial methods for the diversity of transdisciplinary partners and contexts. One issue has been the gap between research and practice, and how this gap intersects aspects of inter-/multi-/trans-disciplinarity, spatial methods, implementation, and sustainable outcomes. Indeed, urban planning has seen a growing body of literature addressing the gap between especially fundamental (i.e., 'academic') urban planning research and practice, particularly in terms of how research may support policy implementation towards greater urban sustainability. Much of this literature is, however, normative, with urban planning academics and researchers arguing how the gap between urban planning research and practice best ought to be bridged, typically through more collaborative and participatory forms of research across disciplines, often citing highly unique examples that may not always be applicable or replicable in other contexts. The voice of urban planning practitioners, especially in terms of their understandings of 'research' and use thereof, remains relatively unexplored and little understood. The few studies that have been conducted on practitioners' use research, point out several factors that may influence the use of research, such as organisational culture and needs, the research itself, and political and market forces. Calls are made for evermore 'platforms' through which to share research. This paper argues instead for a more nuanced understanding of practitioners' use of research, and how we may better respond in terms of research processes and methods. Preliminary findings are presented from an exploratory qualitative study of urban planning practice and practitioners' use of especially fundamental research, based on in-depth interviews and focus groups with a small but purposeful sample of planning firms in Pretoria, South Africa. Using an inductive analysis and heuristics from social sciences methodology, conclusions are made regarding (mis)understandings of fundamental research, how it is currently used and can be used more effectively towards urban sustainability, and what the possible implications are for spatial methods. Suggestions are also made for more systematic research on the gap between urban planning research and practice, that may draw on conceptual frameworks from the sociology of science and specifically research evaluation.



SMUS 23_25-02

From Cases and Actors to Action and Implementation

Session Organisers:

Fraya Frehse

Professor, Universidade de São Paulo

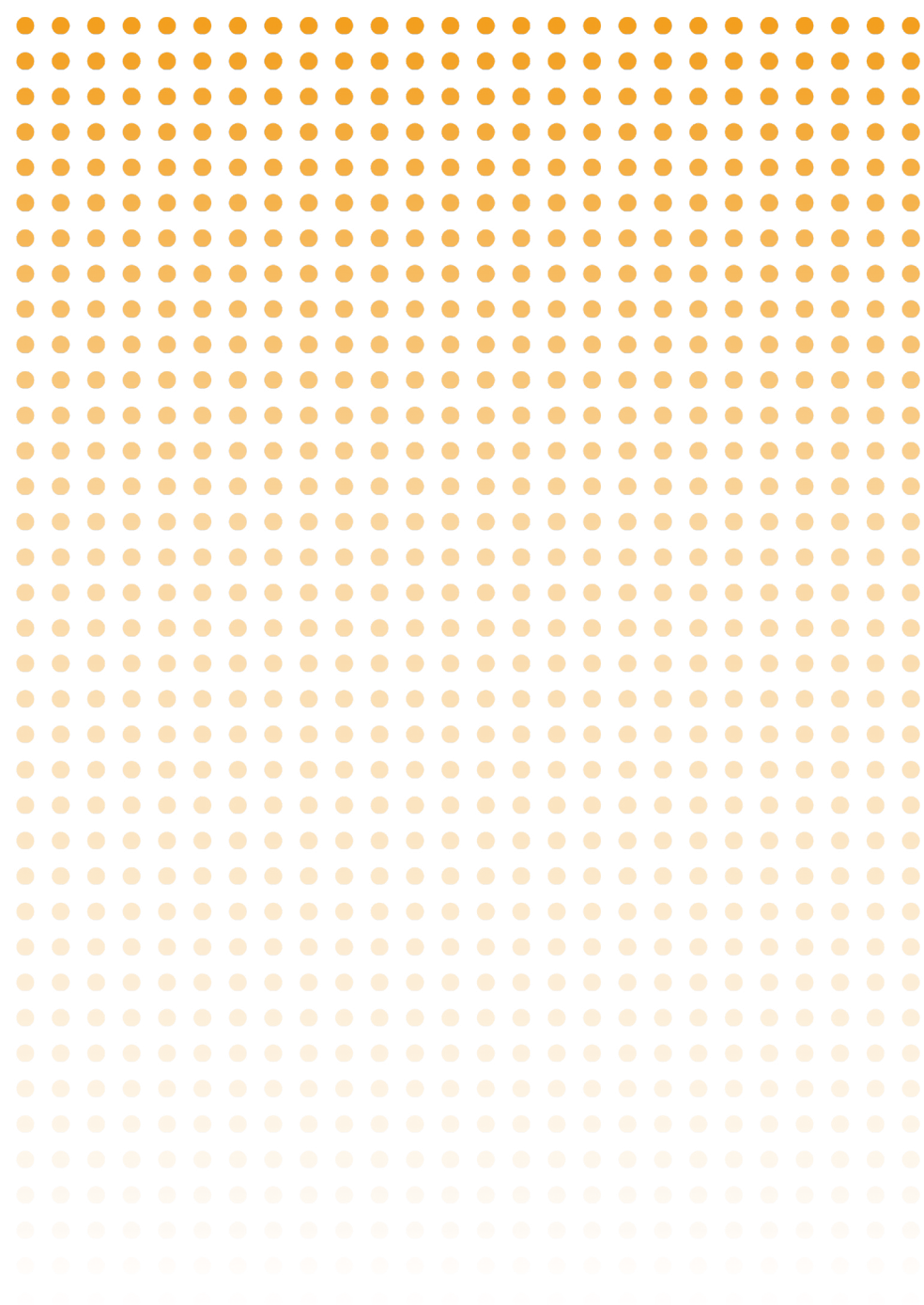
Angela Million

Technische Universität Berlin | Director, GCSMUS

Ignacio Castillo Ulloa

TU Berlin





01

Making of Creative and Knowledge Cities – Lessons Learned in Skopje

Keywords: Creative City; Knowledge City; Regeneration; Innovation; Cultural Heritage

Ogden Marina ¹

(1) Faculty of Architecture, University "Ss. Cyril and Methodius", Macedonia

Cities are complex, open and dynamic systems shaped by multitude of stakeholders and activities creating new relationships, networks and products in social, cultural, economic, political, environmental and many other domains of cities. Urban context is a desirable place for many creative actors, organizations and institutions mainly due to its openness serving as an enabler for many new and creative partnerships. Collaboration thrives when there is an openness to embrace new practices and thinking, but also when there are rules and leaders. Urban contexts and cities are the “natural” environment for the innovative partnerships and the result of these creative collaborations are innovations that are driving the urban society, economy and culture. Making cities to become more sustainable is hard. Making them to be more inclusive is even harder. Making cities more sustainable and inclusive through promotion of innovative solutions based on creative industry and knowledge is a multifaceted challenge even for the cities that claim to reach a high level of development and utilization of such innovation and knowledge in urban practices and policies.

The idea of the Creative city although still remains to be without clearly defined limits continues to provide a solid ground for renewed interest in sustainable urban development through transdisciplinary actions and practices that continues to emphasize the importance of the cultural and knowledge dimension of urban environments (Segovia and Hervé, 2022). Numerous cities and regions design policies seek to act on the sphere of urban sustainability (UN 2005) and inclusivity through culture and the main international organizations recognize the central importance of culture, creativity and innovation in urban governance and city development (OECD 2018; UNCTAD 2019; UNESCO & World Bank 2021).

Today, creative collaborations through innovative partnership have seen a sharp rise in urban context through interest for new practices that foster transdisciplinary exchange and cross-institutional and cross-disciplinary collaboration. These creative collaborations highly value action-based practices of networking and cross-disciplinary exchange as to bringing together different perspectives. Moreover, they value contextual specificity and can provide access to practical, technical, but also civic and symbolic aspects of people’s experiences in cities not easily accessed by mainstream practices. Creative collaborations are goal-oriented collaborations intended to produce new and added value products, objects and activities through partnership of various stakeholders and organizations sharing the same objectives or goals. These new and usually innovative partnerships enable creation of previously unforeseen and creative results. Moreover, innovative partnership in cities enable creative solutions improving the quality of life, or in other words, the livability, like never before. Some of the measurable aspects affecting livability among many can be experienced in innovative urban policies, new spatial and cultural practices, digitalization of society, urban mobility, urban ecology and many others. Understanding the impact of such innovative and transdisciplinary partnerships enables us to foster and create urban development policies and practices that will ensure the sustainable and resilient cities of the future.

This paper explores concepts, spatial methods, digital tools and policy documents that were developed within the Horizon 2020 funded ROCK project (Regeneration and Optimization of Cultural heritage in Creative and Knowledge Cities) in order to challenge the contemporary urban context and to facilitate the awareness and insights that enable an innovative actionability of institutions, organizations and citizens through innovative and transdisciplinary concepts, practices, tools and policies. ROCK project explored several types of innovative partnerships facilitated through re-use of Cultural heritage in cities: Innovative partnership with Institutions; innovative partnership with citizens and civic groups and innovative partnership with creative and culture industry.

A number of digital tools were developed including ROCK Atlas – an interactive digital platform for collection of data that has been spatialized and transformed into knowledge following the development of the Rock project in the three replicator cities, mapping the urban context, the actions carried out within the project and the connection with the model practices implemented in the network of cities participating in the project. The ROCK place branding toolkit provided analysis, reflection and guidance on how to better communicate the city through Cultural Heritage. It helped to identify the concepts and practices that can be used for constructing a consistent narrative of the historical European cities in a contemporary global context. One of the goals of the ROCK project is to make the generated data freely and easily available to those who are interested. The ROCK interoperable platform implements this function. The data provided by the project partners is available on this platform through an open data component based on CKAN technology. The visualization of the collected data is possible through the business intelligence component. This component allows visitors to use various dashboards, which are related to project activities, city assets, and data collected by environmental and visitor flow sensors that were installed in the cities by the technological partners of the project. The web application allows centralized access to the various components of the platform and provides an interactive map as well as a possibility for querying data based on semantic web technology. The ROCK webinar program was designed to showcase the leading cultural heritage projects which are driving sustainable urban regeneration across Europe on a range of topics relevant to cities, including cultural policy, circular economy, citizen engagement, adaptive reuse, new technologies, and urban biodiversity. More than twenty policy documents guidelines, factsheets and white papers were developed within the project clearly outlining the methodology and the outcomes of the project partners actions. Bologna U-Lab and Skopje Urban Living Lab were deployed as a place and a space of collection of knowledge of the Bologna's and Skopje's built cultural heritage and as a tool for transformation of GIS and other data into meaningful information that will be useful for the local community steering the urban innovation through knowledge and creativity.

The paper provides an insight, critical review and lessons learned from the concepts, methods, tools, actions and results of the Horizon 2020 funded ROCK project in the domain of creation, recognition and facilitation of innovative partnerships based on interdisciplinary research and re-use of Cultural Heritage as a resource and transformative agency for new and creative policies and practices in the city of Skopje.

02

Street-level Acoustics as a Measure of Liveability of Sustainable Urban Neighborhoods

Keywords: Urban Acoustics; Liveability; Neighborhoods; Sustainability; Spatial patterns

Mamatha P Raj ¹, Dakshayini R Patil ¹

(1) BMS College Of Architecture , India

The paper broadly begins with the interest of sustainable designs of urban residential neighborhoods in a typical city of India, in the Asian sub-continent. The UN SDG 11 mentions ‘Make cities & human settlements inclusive, safe, resilient, and sustainable’. While most evident parameters of sustainability are known and addressed towards safer, pollution-free & healthier cities, one of the commonly understated criteria is sound or noise pollution. Comprehending impact of noise pollution on human comfort becomes necessary to resolve the environmental design parameters & create better spatial manifestations for achieving livable neighborhoods as an aim under urban sustainability. Health of citizens is one of the most important characteristics achieved with clean air to breathe, clean water to drink and safe food to consume as cities facilitate this. Hearing is one of the five fundamental senses of living beings, and thus safer sound levels should be a factor of designing healthy cities.

City designs are conventionally based on tangible technical aspects of planning such as transportation, landforms, or land uses. Whereas Urban acoustics or sound levels in the city rarely contribute towards decision-making in the master planning processes with social livability objectives. Sustainable urban planning or design in reality is never singular in approach, it is rather multi-faceted and plural with the indulgence of trans-disciplinary aspects of transportation, sociology, economy, engineering, medical, environmental, disaster management & such. Likewise, this study with the objective of designing for acoustical comforts involves the discipline of urban acoustics to achieve livable urban neighborhoods.

Rapid urbanization in India has led to various unintended byproducts and public health challenges, including pollution of air, water, soil, and noise, which is overshadowed by the previous three. Noise is regarded as a pollutant under the Air (Prevention and Control of Pollution) Act, India (1981). Noise refers to unpleasant, annoying, distracting, or persistent sounds that interfere with sleep or the ability to concentrate or enjoy life. It can cause cardiovascular and psychophysiological effects, reduce performance, and provoke changes in social behavior. However, it is a physical pollutant, not visible and the damage occurs silently, going undetected and can even endanger life.

Man-made noises are the leading cause of noise pollution, altering the acoustical environment in cities impacting humans, birds, animals, and aquatic habitats alike as studies have shown. Whilst natural sounds have always been present in the environment and majorly not harmful; man-made noise which is a much recent phenomena after advent of vehicles and industries poses specific damages. This type of noise pollution is so omnipresent in today’s urban areas that it is often failed to be noticed as a critical parameter of a healthy sustainable society.

Urban dwellers are exposed and accustomed to sounds of varied nature- some endearing while some disturbing. World health Organization (WHO) specifies that both too little sound and too much sound can be harmful for humans. For this reason, the quality of the acoustical environment

people dwell in becomes critical. A continued regular exposure to noise levels beyond the bearable range proves detrimental. WHO stipulates sound levels less than 70 dB as acceptable, beyond which hearing impairment sets in for an exposure period of 24 hours. The range of human hearing is operated through a relatively fixed frequency band between 20 Hz & 20 KHz. Anything beyond this and exposure of more than 8 hours to levels of 85 dB proves hazardous to health. When noise is above 45 Db (decibels), it can affect sleep patterns in human beings. These aspects shall qualify as exposure to noise pollution. Broadly, the types of outdoor noises include- natural sounds and sounds due to activities of men & machinery, the types shall be an outcome from this study.

This research aims at trans-disciplinary understanding of urban design of neighborhoods and urban acoustics using qualitative assessment supported with quantitative evaluation of data. The intent is to perceive the impact of soundscapes in terms of acoustical comforts to urban residents. Towards this the main objectives of the study include:

1. To understand existing literature on acoustical or soundscape theories
2. To understand sources/origin of different types of urban sounds in typical Indian cities
3. To analyze correlational attributes of sounds with the spatial patterns of the urban context
4. To determine governance mechanisms as per Indian codes for noise level regulations
5. To deduce urban design strategies for acoustical comforts in urban environs.

The impending research questions thus- Does 'sound' as a parameter insinuate planning and design decisions for creating livable urban neighborhoods in cities? Does the spatial plan become a determinant of 'urban acoustics' and social livability thereupon?

Hypothesizing the inquiry as: 'Street-level acoustics become a function of the spatial pattern of the neighborhood and determinant of the social liveability index of the neighborhood'.

This hypothetical inquiry is enabled with a methodology that involves two dimensions & correlative analysis between spatial planning of neighborhoods and the acoustical observations.

The proposed methodological triangulation relies on three aspects of data collection- Theoretical base, Soundscape audits (field survey) and Ethnographic survey (interviews/ questionnaire survey). Literature review primarily theories of Truax (1978) & Schafer (1979) intend to extend the concept of architectural acoustics to the wider urban realms. The primary data-collection involves case studies and field surveys adopting Sound level meters and specific Smart phone Applications (Apps) for quantitative assessment. The qualitative analogy is achieved with an ethnographic based survey using tools of questionnaire/ interviews for firsthand perspectives from people on their neighborhoods. A hierarchical three-tier probing is adopted with people expressing their opinions in terms of instinctive, mild effortful thinking and emphasized thinking about sound. This in purview of the understanding that Indian user group are accustomed to urban noises and tend to be psychologically adapted to the same without consciously being aware of the negative implications on various health conditions.

Truax defined soundscape on the way it is perceived by an individual, or by the society. While Schafer emphasizes on the behavioral responses of creatures to acoustical environments. Just as vision can reveal a place's physical identity, so does sense of hearing create an image of the place. It is important to identify pleasant sounds and use them to create healthier environments.

Most cities in India are heavily populated, neighborhoods being dense mixed-use developments and hence host varied activities and intense traffic with evidence of heavy noise pollution. This

research is demonstrated in the metropolitan city of Bangalore, in the southern state of India. Two neighborhoods are selected in the city each with a broad characteristic based on the spatial pattern of planning. The identified variables based on the alternate hypothesis are used to test, analyze, and derive results. Sampling design for the study are arrived based on validation & reliability tests post the pilot survey in one of the neighborhoods.

Architectural acoustics in building indoors has been an important aspect of infrastructure design with much research & innovation taking place in terms of materials, techniques, or engineering. User at-ease is the aim when acoustical designs are undertaken for creating comfortable audible experiences for people. Similarly, outdoor spaces in neighborhoods used by people need to be designed with ideal soundscapes along streets. Hence, urban acoustics becomes critical as well with much to offer in city designs but this as a discipline is yet to evolve as a formal science or research & has limited offerings presently. Urban designers need to design the cityscapes for ideal acoustical experience for people along with the functional and aesthetical design objectives towards aims of place-making (Art of making the urban spaces people-friendly in all ways) and healthy safe residential zones.

Noise pollution at most times is not just spot-specific but bears a hierarchical impact of the occurrence from a regional level. Urban planning & design factors leading to production of noise must be analyzed in terms of zoning, land use allocation or activity spots. Allocation of the main land uses – residential, commercial, industrial, institutional, public & open spaces have a larger impact in regulating the activities and correspondingly the noise along the residential zones. City masterplans when configured and sensibly drawn up become reliable documents to foresee a city growth that is socially sustainable in all ways. At this juncture, it becomes essential to understand the regulatory norms in place towards addressing noise pollution in cities under statutory provisions by the States. The study undertakes review of norms stipulated by Constitution of India, Law of Torts, Indian Penal Code, Criminal Procedure Code, Police Act, 1861, Motor Vehicles Act and the Air (Prevention and Control of Pollution) Act, 1981 to evolve strategies in conjuncture ahead.

The trans-disciplinary study between urban design and urban acoustics shall enable goals of achieving safe sounding cities for its people when they are within their homes or in the public spaces of their neighbourhoods. With not much research currently available on acoustics specifically in the urban spaces, this study triggers relational perceptions between spatial planning and urban sounds. The study shall identify based on the methodology triangulation, sound ranges prevalent and social perceptions from inhabitant, the impact of the same at various levels and lay out vision for future liveable communities in our neighbourhoods. Finally, strategic proposals are deduced for 'Urban acoustical resilience' as suggestive action plans to city development towards tackling the challenges with the correlative principles of trans-disciplinary research, while understanding where the focus can be advantageously placed. Thus, the outcome of the research will be strategic urban design framework in addressing observed criticalities to create better livable neighborhoods in Indian cities.

03

Resilient Space Strategies from Emergencies

Keywords: Emergency; Urban Sociology; Open Space; Community; Design Parameters

Ludovica Gregori ¹

(1) University of Florence, Italy

The pandemic stressed the importance of social interaction in open spaces, the urban connective tissue that promotes community strength. Thanks to its versatility, open space can be a resilient tool for sociality. The study of temporary post-emergency settlements can provide time-sensitive resilient urban answers to foster social liveliness.

For temporary post-emergency design, there is a need for a social approach and a design that focus on open spaces based on proxemics, urban sociology, and environmental psychology. Time-consciousness trains designers to quickly and precisely identify fair and efficient methods that can be replicated in other urban forms.

Strategies from post-emergencies can prevent damage to social systems when translated in user-friendly guidelines, based on tested tools, for next-generation policymakers, architects, and citizens. The scientific community can use the method of analysis, selection, and interpretation of space to enhance sociality also in other urban forms.

The implementation of the proposed qualitative design solutions provides for their translation into spatial parameters to be used through planning and digital tools. This process needs the identification of indicators to assess spaces' characteristics that can contribute to well-being. For the validation of these factors, both on-site and virtual testing are evaluated.

04

Investigating Causes of Transportation Bottlenecks: A Case Study in the City of Pune

Keywords: Transportation bottlenecks, Urban congestion, Mixed use transport, Congestion Index

Samruddhi Sachin Purohit ¹, Prof. Amruta Garud ¹

(1) MKSSS's Dr. B. N. College of Architecture for Women, Pune , India

Abraham Maslow, in his paper “A Theory of Human Motivation” published in 1943, introduced the hierarchy of needs as a psychological idea and, also an assessment framework in social work, healthcare and education. Maslow identified the patterns that human wants and motivations often follow using the phrases “physiological,” “safety,” “belonging and love,” “social needs” or “esteem,” “self-actualization,” and “transcendence”. Transportation and housing are categorised more under safety and security in this hierarchy of necessities. Due to the influx of people in search of a better quality of life, the population dependent on the amenities of metropolises has drastically increased. As the number of users has augmented, a strain has been created on the existing framework of resources leading to an impassable rift. Traffic bottlenecks are one of the primary indicators showing this increase in demand and decrease in the carrying capacity of the city’s services. Albeit the myriad causes of bottleneck formation, the most accredited impetus is improper road connectivity and imbalanced user distribution. The repercussions of such congestion are not only limited to the immense loss of economy and depletion of resources but also a detriment on the human mindset.

Urban planning, urban transportation and infrastructure planning, urban economics, and other fields with a similar focus are all interested in how to solve the problem of urban traffic congestion, one of humanity’s biggest present and future difficulties. Although these domains shed some light on the issue, we still have limited knowledge of the fundamental principles governing the evolution of urban traffic networks because we do not completely comprehend the broad co-evolutionary mechanisms underpinning their intricate dynamics. (Rong Li, 2018)

This paper aims at investigating the causes of bottlenecks and their multifaceted impacts on human life with the help of a case study of Chandani Chowk in Pune. Located in proximity to the financial capital of India is Pune, an industrial and IT hub. The city has seen a spike in its population, ever since it increased from 1.6 million in 1991 to 2.5 million in 2001, showing a 40% decadal growth and if this trend continues, it is predicted that the city’s population would reach 5.6 million by 2031. The population density has also increased to 462 density/sq. km according to the 2001 census, as opposed to the density observed in 2011 that amounted to 603 density/sq. km.

Built-in 1992 by the state’s then Public Works Department (PWD), Chandani Chowk serves as an entry point to the city and caters to the paramount traffic entering Pune from the western side. The intersection between the Pune-Bengaluru Highway and the Mumbai-Pune Expressway is an eminent reason for the surge in the populace. The vehicular traffic that arrived from areas such as NDA, Warje and Bavdhan, along with the one going towards Bhugaon, Pashan and Lavasa, also got reorganised here. Unprecedented growth in the scale of users leading to blockage within its vicinity indicated a burden on the planned services. To tackle this impediment, the Union Minister for Road Transport and Highways laid the foundation stone for the construction of a multilayer flyover plan. The project aims to provide a permanent solution to the traffic bottleneck occurring at

the pivotal entry point and will supposedly reach completion by 2023.

Two routes emerging from the same node are taken into consideration to investigate the repercussions of traffic bottlenecks. The first route goes towards Mulshi, an eco-tourism hotspot on the outskirts of Pune. The latter leads towards Pashan and is located close to the Rajiv Gandhi Infotech Park in Hinjewadi. The study methodology relies on crowdsourced real-time travel primary data and its validation with Google Maps API matrix. An origin-destination survey conducted amongst people using the route helped in deriving the time required for travel during various hours of the day. The Congestion Index, Delay Rate Index and Travel Rate Ratios are calculated for both routes using the data obtained during four specified periods of the day. These transportation indices assist in carrying out a micro and meso level analysis. Owing to its intensive nature as a ratio, the Congestion Index is most preferred for the quantitative identification of the magnitude of the connectivity issue. (Thilakshan & Bandara, 2020). This overview helps in analysing the behaviour and tendencies of the bottleneck. A comparative analysis of these parameters at varied time slots helps gain insights into the trends of congestion periods and the type of users causing the congestion.

Since the category of masses using the routes during different spans of the day change, the intensity of effects due to this inconvenience also differ. The extent of these ramifications is not only limited to tangible resources and monetary wastage (Afrin & Yodo, 2020) but also the toll on mental health and social well-being (Venkatesh, 2014). Along with the users, the residents in the vicinity are subject to collateral damage due to this urban planning hindrance. Unstructured interviews were used to examine the nature of the perplexities faced by the inhabitants. Even though the root cause of congestion has been addressed, the upcoming development is bound to create a novel environment in terms of accessibility and transportation. For the same reason, a thorough analysis of antecedent usage is crucial. The research probes the scope of transportation indices and their interpretation of the lives of users. India, being a country of 138 crore people, does not have its resources priced at a cheap amount. Transportation bottlenecks and congestion are drawbacks in the realm of urban planning that can be ameliorated for the benefit of the citizens with the help of multifarious approaches and outlooks.

05

Potential for Reducing Energy Demand in India's Residential Housing through Retrofit Measures

Keywords: Potential Energy Savings; Housing Stock; Residential Buildings; Energy Retrofit

Shalini Keshri ¹, Priyanka Dey ¹

(1) Indian Institute of Technology Kharagpur, India

Rapid urbanization in our cities has brought to light multiple gray areas in our conventional design principles and planning practices. Energy demand is one such sector, posing an impending energy shortage in near future and pushing the need to seek out alternative energy sources and energy-efficient practices.

Building energy demand accounts for 30-40% of the global energy demand and more than 50% of the global electricity demand (Ala-Juusela & ur Rehman, 2020; International Energy Agency, 2018). The advent of green practices mostly advocated energy-responsive measures only for new developments, as opposed to shedding light on energy retrofit options for existing buildings. As a result, energy codes and standards today focus primarily on controlling energy demand for new construction by modifying connected load demand, basic insulation measures, and air tightness of spaces. The Indian construction sector has gradually augmented from the voluntary inclusion of green building ratings including GRIHA, IGBC, and BEE Star ratings to the compulsory implementation of the Energy Conservation Building Code – Commercial (2017) and Residential (2018) for the new constructions across eighteen states and two union territories (Bureau of Energy Efficiency, 2021).

Despite the fact that numerous programs and policies across the world attempt to address the energy challenge with diverse possible solutions, leading to a gradual paradigm shift, it has had limited impact in keeping pace with the rapid increase of energy demand and related concerns. Even though multiple works of literature commend retrofit measures for existing buildings as a viable solution, multiple barriers including lack of technical skills, hesitation, and reluctance to invest in retrofit projects have been identified (Lee et al., 2014; Ortiz et al., 2019). These multiple barriers and lack of information have resulted in very little advancements of retrofit measures in the form of practice and policy frameworks, making it critical to investigate the applicability of retrofit measures at an urban scale for achieving our energy targets.

The trend of energy retrofit in existing buildings is a relatively recent notion that is being contested in terms of its application as well as the level of efficiency; and user satisfaction that can be achieved from it (Dandia et al., 2021; Kumbaroglu & Madlener, 2012; Menassa, 2011; Surya Prakash et al., 2021). The retrofit of the existing building offers a reduction in the requirement for raw materials for new constructions, lowering the cradle-to-grave embodied energy and life cycle cost of the developed structures (Praditsmanont & Chungpaibulpatana, 2008; Sharif & Hammad, 2019). Although there are works of literature available on building energy efficiency and energy retrofit strategies globally, relatively few are replicable in the context of India's locational and prevalent climatic conditions. According to the International Energy Agency, to satisfy emission reduction and global warming goals, up to 20% of existing buildings must be 'zero-carbon' by 2030 (International Energy Agency, 2021). Studies conducted by the Bureau of Energy Efficiency note a significant reduction of 30-40% in the energy demand of existing buildings through retrofitting

(Bureau of Energy Efficiency, 2022). In their analysis, Radwan et al., 2016 also identified the potential for a 41% savings through retrofit measures as compared to their existing case.

In their study, Chaturvedi et al., 2014 observed that Indian building energy demands differ from those of other countries around the world and hence require unique consideration to assert the potential for savings while changing from Business-as-Usual (BAU) to more efficient solutions. According to the studies reviewed, retrofitting older buildings can result in considerable savings. In this regard, the majority of available works explore the results at the building unit level, with only few addressing them at the metropolitan or urban scale. This gap in literature increases the hesitation to provide policy frameworks and reduces the opportune economies of scale by retrofit measures at the urban scale, which forms the focus of this study.

This study investigates the potential savings from retrofitting India's housing stock on a national scale. The purpose of this study was to determine the possible decadal energy savings that can be realized from India's existing residential stock by 2050. This study shall also contribute to the existing literature by providing a scenario-based analysis of potential savings of energy demand through the implementation of different scales of retrofit intervention on the existing national residential built stock.

A two scenario-based approach was undertaken, where the existing quantity housing stock of India was tested hypothetically to project a potential decadal energy demand reduction till the year 2050, one in totality and the other in a phase-wise approach. The first scenario assumed that all existing housing stock needed to be retrofitted, and it was recognized that differing levels of retrofit interventions may reduce energy demand. The second scenario looked at housing conditions such as 'Good,' 'Livable,' and 'Dilapidated' to see the scale of demand reductions. In the second scenario, the assumption that existing building stocks may require minor refit every 30 years and moderate-to-significant retrofit by their 50th year was used for analysis. It was also assumed that the housing stock would increase in line with corresponding census growth trends. The metrics for the level of retrofit interventions were categorized as 'Minor,' 'Moderate,' and 'Major' (Minor -16.87%, Moderate- 19.87%, and Major -24.12% of savings respectively) through the findings of the literature (Sharma et al., 2022).

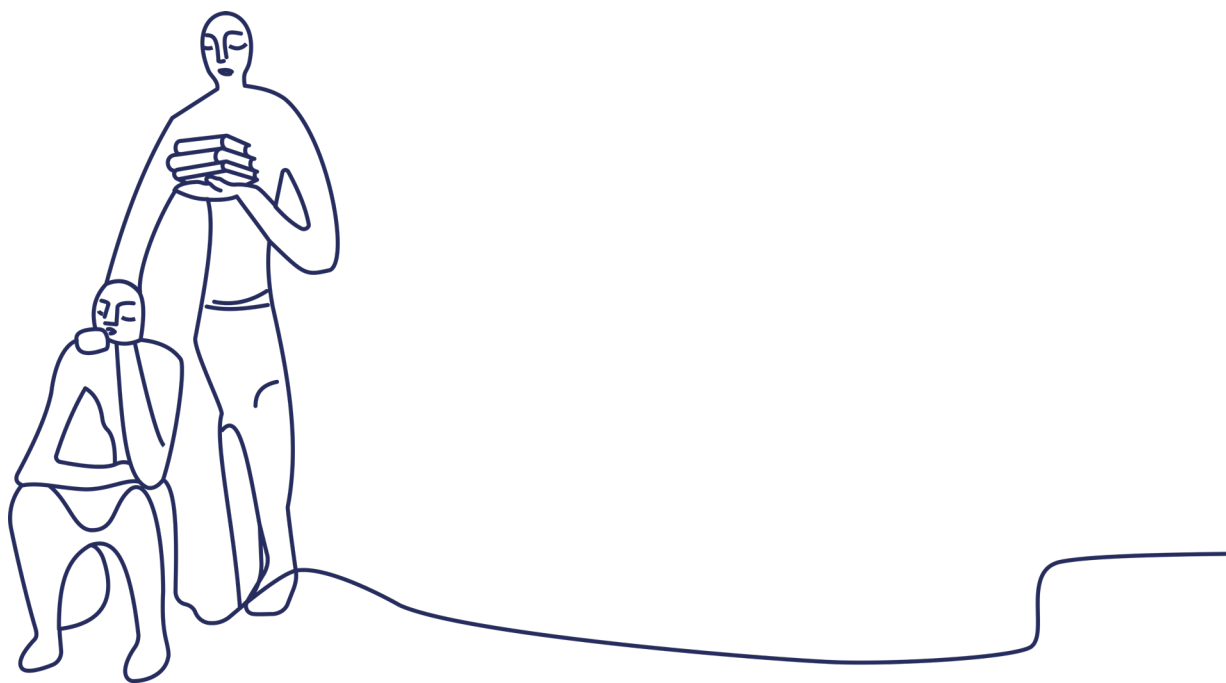
The data used for the study were collected from secondary sources including the past Census population and household stock data, current energy demands for residential use in India, and the percentage of savings possible to be achieved as per literature. The analysis was based on growth trends and expected increases in population, household size, energy demand, and the rate of housing stock addition per decade.

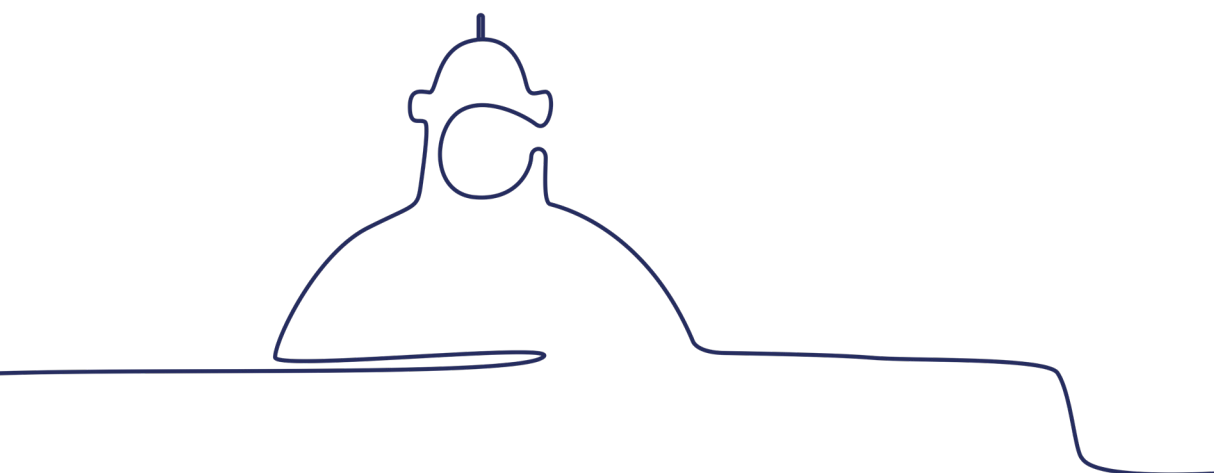
The analysis found that the two scenarios of retrofit methods for existing residential building stock resulted in a significant reduction in annual energy demand at the national level. In the first scenario, where it was assumed that all current stock needed to be repaired each year, it was discovered that by 2051, minor, moderate, and major interventions may cut energy demand for residential usage by 132.67 Terawatt (TW), 157.85TW, and 191.61TW, respectively. However, as all buildings do not become eligible for retrofit every decade and also raise economic concerns to retrofit this large housing stock at one go, the need to analyze the buildings based on their conditions was identified in the second scenario. The building stock was classified as 'Good,' 'Livable,' or 'Dilapidated' by Census 2001 and Census 2011, and the average share of each type in the residential stock was calculated. When the building stock was examined under the second

scenario, the cumulative savings that can be obtained through phased interventions resulted in a 36.3TW decrease in residential energy consumption in 2021, which can be extended to 95TW by 2050.

Although the idea of modifying existing buildings to lower their energy consumption is frequently discussed; due to the numerous uncertainties and hazards involved, it is also increasingly regarded as one of the primary options that can provide a boost to meeting the global sustainable development targets. This study focused on the potential savings that can be realized by implementing retrofit measures on India's existing residential stock, while also forecasting probable future savings chances for forthcoming developments through 2050. The study discovered that if retrofit measures are tailored to repair and retrofit projects with varied scales of small, moderate, and major repairs, depending on the project's condition, significant energy savings can be generated. As this study only assessed the residential energy savings from the hypothetical two-scenario-based projections, subsequent scopes of the study can look at an actual experimental study and reflect the potential financial gains to provide a greater understanding of savings.

The inclusion of retrofit solutions at an urban scale promises a large potential for savings, which in turn can bring a morphological change in the setting of urban spaces. To bring about these changes, stakeholders such as designers, building users, and policymakers who are directly or indirectly involved in retrofit projects must first change their perspectives and overcome the challenges and barriers identified during the project planning and implementation stages. The variation of retrofit measures through various levels of intervention can aid in the decision-making process for selecting appropriate retrofit measures, as well as in selecting feasible financial support with consideration for the recurring costs of household energy demand and its associated costs in projects. This in turn underscores the necessity for a more detailed study at an urban or regional scale, to quantify the potential savings in the terms of energy as well as expenses; and aid in the design of a comprehensive framework and early intervention for energy demand reductions.







SMUS
INDIA



exceed

Deutscher Akademischer Austauschdienst
German Academic Exchange Service